DISCLOSURE OF PROFIT FORECASTS DURING TAKEOVER BIDS

NIAMH BRENNAN

B.SC., FCA

Thesis submitted for the degree of Doctor of Philosophy

at the School of Industrial and Business Studies,

The University of Warwick.

August, 1995

For Michael

&

Hugh, Ross and John

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ACKNOWLEDGEMENTS

My warmest thanks to those who helped me with this research:

My supervisor, Professor Sidney Gray, was at all times helpful and encouraging and made this research a worthwhile and enjoyable experience. Prof. Anthony Steele, Prof. Jack Broyles, Prof. Richard Hyman and Prof. Paul Stoneman of The University of Warwick also contributed helpful suggestions.

The financial support of The Irish Accountancy Educational Trust and the Commerce Faculty, University College Dublin is gratefully acknowledged. KPMG Peat Marwick, London and Extel Financial Limited provided access to the data necessary to carry out this research.

I thank Ray Ball, S. P. Kothari, Amin Mawani, Dieter Ordelheide, Mike Power, Katherine Schipper, Andrew Stark, G. Peter Wilson, Steve Zeff and workshop participants at the European Institute for Advanced Studies in Management, Brussels and the 1994 European Accounting Association Doctoral Colloquium for their helpful suggestions. I also received many useful comments at the 1994 American Accounting Association Doctoral Consortium, Lake Tahoe, California. I thank the British Accounting Association for selecting me as their representative to attend the Consortium and Bass Leisure for generously sponsoring my travel costs.

Terence O'Rourke and Catherine Murphy of KPMG Stokes Kennedy Crowley, Gerardine Jones of the Irish Stock Exchange, Rory Mason of Riada stockbrokers, David McCrossan, Peter Coyne and Walter Hobbs of AIB Corporate Finance dealt with my many queries. I thank the interviewees who, because anonymity was guaranteed, cannot be acknowledged individually here.

My colleagues, Bill Roche and Louis Murray, made useful suggestions during the research. Brendan Whelan of the Economic and Research Institute, Dublin, Teresa Breathnach, John McCallig, Rodney Thom and Anthony Murphy of University College Dublin helped me with the data analysis. In particular, the advice on methodology from Anthony Murphy was invaluable.

I thank my colleagues in the Department of Accountancy, University College Dublin for their support and friendship during this project. Kate Marshall provided excellent secretarial support. Linden Lee solved all my computing problems. Aileen Pierce, Michael McDowell and especially Catherine O'Dea provided advice and help with proof-reading and editing this thesis. Claire Marston and Imelda Lambkin made useful suggestions on structure and layout.

Lastly, I thank Mandy Clarke who looked after my three young sons and ensured that domestic and family life ran smoothly during the period of this research. Without Mandy's support I could not have undertaken this project, particularly as it involved extensive travel commitments.

ABSTRACT

This thesis examines disclosure of 250 profit forecasts in 701 UK takeover bids in the period 1988 to 1992 against five research issues:

- Factors influencing disclosure of forecasts
- Influence of prevailing market expectations
- Effect of disclosure of forecasts on the outcome of bids
- Factors influencing disclosure content in forecasts
- Whether forecasts disclosed convey good news

Logit analysis and negative binomial regression are the two primary statistical techniques used to analyse the results.

Results show the domination of the takeover-context of the research. Two variables accounted for almost all the influence on disclosure of forecasts for both bidders and targets: bid horizon and type of bid. Probability of disclosure of a forecast is greater the shorter the bid horizon and during contested bids.

In addition to bid horizon and type of bid, for bidders, year, value of bid and purchase consideration were significant, and for targets value of bid and industry were significant in one of the two models estimated.

Evidence supporting the hypothesis that forecast disclosure is more likely when market expectations are out of line with actual results is provided.

There is some evidence that forecasts by targets affect the outcome of bids, but there is no such evidence for bidders.

Takeover-context variables and forecast-related variables were most relevant in determining disclosures in forecasts. Disclosure content in forecasts was significantly greater during contested bids, in voluntary forecasts and in longer period forecasts. Significantly more assumptions were disclosed by target forecasters and in longer horizon forecasts.

Evidence shows a tendency to disclose good news, with some disclosure of bad news. Good news forecasts are more likely during contested bids. Targets are more likely to disclose bad news forecasts, but when bidders disclose bad news it tends to be worse on average than targets' bad news.

Chapter 1: RESEARCH PROBLEM, DEFINITIONS AND REGULATORY FRAMEWORK

1.1 Research problem

This thesis is about voluntary financial disclosure by companies. The voluntary disclosure decision chosen for study is disclosure of profit forecasts during takeover bids. The research is a systematic, empirical study of disclosure of profit forecasts and of content of disclosures in profit forecasts disclosed during takeover bids.

Forecasts are rarely disclosed in the UK except in new share issue prospectuses and during takeover bids. Thus, most UK research into disclosure of profit forecasts is based on disclosures in prospectuses and in takeover documents.

Most prior research on voluntary disclosure in both the UK and the US examines disclosure in routine business settings and does not focus on environmental factors facing the firm at the time of disclosure. The choice of specialist setting of takeover bids enables study of the effect of the context of disclosure on voluntary disclosure decisions.

Previous studies in the UK, by and large, have considered the topic of profit forecasts during takeover bids from the standpoint of accuracy (Carmichael, 1973; Dev and Webb, 1972; Westwick, 1972). Since the early 1970s there has been little empirical research on profit forecasts released during UK takeover bids.

Forecast disclosure in UK new issue prospectuses has been studied relatively recently by Ferris (1975 and 1976), Keasey and McGuinness (1991) and Firth and Smith (1992). These studies focused mainly on accuracy of, and bias in, the forecasts.

Making Corporate Reports Valuable: a survey of corporate reporting practices by major UK companies (Gray, Roberts and Gordon, 1991) (MCRV) identified

the extent to which companies disclosed financial information on a voluntary basis in annual reports and in non-periodic reports such as prospectuses. MCRV concluded that, in the context of non-periodic reports, there is often a stimulus to disclose additional information voluntarily. The report contends that the provision of such voluntary information appears especially common in the case of contested takeover bids. In the sample of 52 takeover documents examined, 11 companies (21%) disclosed a profit forecast. Eight forecasts (38%) were disclosed in 21 contested bids; three forecasts (10%) were disclosed in 31 uncontested bids/mergers. Thus, there is evidence of greater voluntary disclosures in contested bid situations.

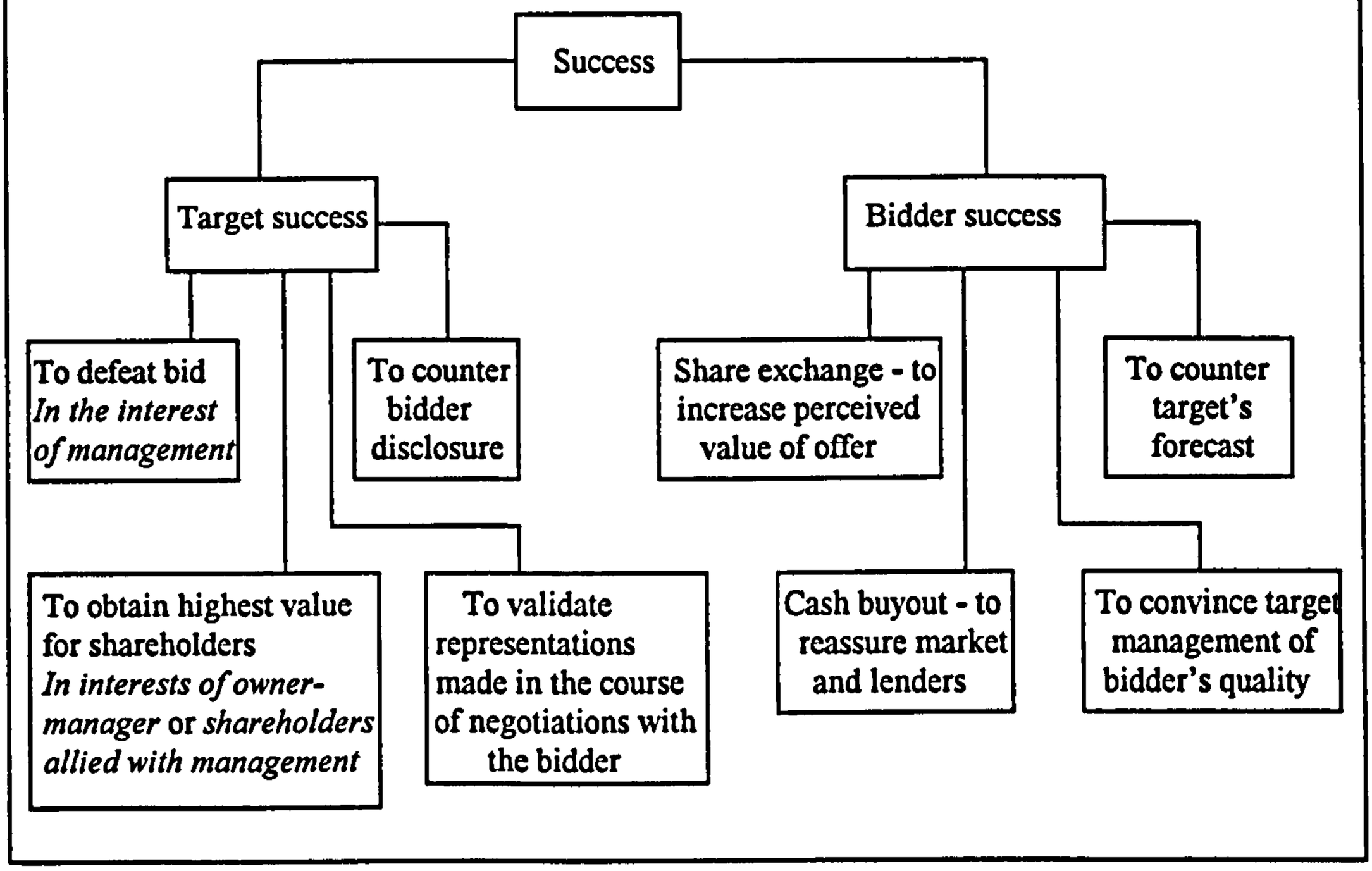
Because there has been little research into disclosure of profit forecasts during takeover bids since the early 1970s (especially compared with research into forecasts made in new issue prospectuses) and because of the preliminary findings in MCRV, takeover bids were chosen as the disclosure context for this research.

1.2 Motivations for disclosure

Although profit forecasts are often included in documents issued by companies listed on the Stock Exchange, there is no Stock Exchange regulation requiring publication of such forecasts. Forecasts are normally made during takeover bids to support arguments being put forward by directors. Forecasts may be used by target company directors to show that shares are more valuable than the bid price or to show that the forecast profits justify their recommendation of the offer. Bidding company directors may wish to provide evidence in support of the value placed on shares offered as consideration for the acquisition. An unwelcome takeover bid is often resisted by financial rather than legal tactics. One important tactic is a statement by directors about future prospects and profits in documents sent to shareholders either by target or bidder companies.

Figure 1.1 summarises possible motivations for disclosure during takeover bids. Bidders and targets are presumed to behave in a manner designed to achieve 'success'. In takeovers the dominant motive for disclosure is to achieve success.

Figure 1.1 Motivations for disclosure of forecasts during takeover bids



Target motives

For targets, there are three main possibilities for success:

(a) To defeat a bid; or

(b) To optimise the offer price if the bid succeeds; or

(c) In the event of not defeating the bid, to optimise price.

Thus, the motive for disclosure may be to resist the offer, or to run up the price or a combination of both; (b) is not necessarily an alternative to (a). It might be a fall back strategy, in the shareholders' interest. It might also increase the bargaining power of a target's management, who can make the takeover more expensive, or can threaten to do so, by resisting the bid.

There is some evidence that bidders in uncontested bids sometimes insist on publication of forecasts by targets as a form of reassurance of the terms of the bid. This reason for disclosure of a forecast by targets is not inconsistent with motive (b) - to optimise the bid price.

Bidder motives

For bidders, 'success' is completing the bid at the lowest possible bid price. Bidders may disclose information to keep shareholders (in the case of share exchange) or lenders (in the case of cash bids) informed. If the takeover is by means of share exchange, a profit forecast by the bidder is aimed at target shareholders to get them to accept the offer, and at bidder shareholders to ensure their approval of the bid. Disclosure of a profit forecast is usually irrelevant if there is a cash offer unless disclosure is desirable from the point of view of market confidence in the bid. In addition, bidders may disclose information to convince management of the target that becoming part of the bidder is an attractive proposition.

If success from the bidder's point of view is defined as completing the takeover at minimum cost, and if success from the target's point of view is defined as maximising the cost of the takeover so as to prevent it completely or, failing that, to maximise the return to target shareholders, than one would imagine *a priori* that any decision to disclose a profit forecast is taken predominantly by reference to whether disclosure will materially assist the forecaster's prospect of success.

1.3 Importance of forecasts

Although historical financial statements provide valuable information, they alone do not meet investors' needs in today's dynamic business environment. Potential investors are eager for insights into a company's future performance. Investors recognise that future estimates from those most knowledgeable about the business are as valuable, if not more valuable, than historical results of the past.

Studies of users' needs have shown forecast information to be one of the most important financial disclosures a company can make (see Courtis (1992) for a summary of this research). Existing research supports the claim that investors make their decisions primarily based on future expectations. Past studies also support the contention that earnings forecasts are utilised in users' decision processes (Benjamin and Strawser, 1974). It also appears that users are not misled by forecasts (Patell, 1976; Danos, Holt and Imhoff, 1984). Given the perceived

importance of future-orientated information, it is surprising that there has not been more research examining disclosure of forecasts and content of disclosures made therein.

Although user surveys rank forecast information very highly, practice is for companies not to disclose such forecasts. Forecasts are rarely disclosed in annual reports (Steele, 1982). Their disclosure is more likely in prospectuses (Gray, Roberts and Gordon, 1991).

The question of whether forecasts should be disclosed has received worldwide consideration for many years. The main arguments offered in support of disclosure are:

- Disclosure of forecasts assist investors' decision making.
- Public disclosure of forecasts helps to ensure more equitable distribution of financial information to various users.
- Comparison of actual and forecast results helps users to evaluate management's competence in planning and control.
- Disclosure of forecasts helps enhance investor-management relations.

Arguments against disclosure are:

- A forecast will, by its nature, be uncertain and may be more misleading than informative.
- Disclosure may be detrimental to the firm due to reduced competitiveness through disclosure of proprietary information.
- Management may subsequently try to align actual results to the forecast to the detriment of the firm.
- Failure to achieve the forecast may result in legal liability claims, particularly in the US.

1.4 Research questions

This thesis examines why some firms voluntarily include a profit forecast in offer or defence documents while others do not. The major objective of the study is to

analyse factors that help explain management decisions to publish a profit forecast during a takeover bid. Since profit forecast disclosure is voluntary, reasons, including managerial incentives, why some companies disclose a forecast and others do not are analysed. Understanding managers' forecast disclosure choices involves considering shareholders' demand for voluntary disclosure and managers' incentives to supply such disclosures.

The literature has not yet produced a consensus on the economic determinants of managers' forecast choices, nor on why managers release forecasts. Empirical literature on management forecasts has been concerned with information content and predictive ability of forecasts, with managers withholding or delaying forecasts, and with characteristics of forecasts and of the firms that release them. Empirical research on financial reporting has typically followed either an efficient markets or costly contracting approach. However, it provides little evidence useful to managers in developing disclosure strategies to communicate effectively with investors.

Prior research has considered disclosure choices from the perspective of agency theory and signalling theory. Given the specialist setting, the issue arises whether signalling theory and agency theory are appropriate as analytical tools in the context of takeovers.

Relevance of agency theory during takeovers

An information gap generally exists between company insiders and outsiders. This view is clearly espoused in agency theory which focuses on the conflict of interests between principals and agents. Disclosure of information narrows the information gap, consequently decreasing agency costs.

Agency costs are likely to be particularly high during takeover bids. Thus, agency theory motivations are relevant to disclosure during takeovers. Bidders' management know more about the bidder than target management and shareholders. Bidders may disclose information to reduce information asymmetry when shares are being issued as consideration, or to convince target management

of bidder's quality. Especially if the bid is for cash that has been financed by borrowing, disclosure of a forecast may be motivated by a desire to reduce information asymmetry between the bidder and the lender.

Agency theory is relevant to bid defences, where target management might be motivated by personal considerations such as job retention or retention of control of the company (in the case of owner managers), at the expense of shareholders.

Relevance of signalling theory

Signalling theory issues, similar to those arising on issuing new shares, are relevant where the bidder issues shares in consideration for the bid. Disclosure of forecasts by targets may signal the target's intention to strongly defend the bid. Disclosure of forecasts and choice of advisors may be used as signals of quality by both bidders and targets.

From these general themes, five research questions, which are discussed below, are identified:

- What factors significantly influence voluntary disclosure of profit forecasts?
- What effects do prevailing market expectations of firm profitability have on disclosure?
- Is forecast disclosure an effective weapon in defence or completion of bids?
- Does the disclosure content of forecasts vary with external factors?
- Do forecasts disclosed have identifiable news content characteristics?

1.4.1 Factors influencing disclosure of profit forecasts

The factors are analysed under two headings - the takeover context of disclosure and the firm characteristics associated with disclosure. Characteristics of forecast disclosing companies compared to nondisclosing firms are analysed to assess whether there are any systematic differences between the two groups. It is hoped that this will further understanding of voluntary disclosure decisions by analysing reasons for any differences found.

1.4.2 Influence of market expectations on disclosure

The research examines the market expectations adjustment hypothesis of Ajinkya and Gift (1984) that forecasts are issued by managers in an effort to move prevailing market expectations toward management beliefs about future earnings. Thus, forecasts are more likely to be disclosed when investor perceptions are most out of line with company results. Aligning market expectations is likely to be more important, and to have greater economic consequences, during takeover bids than in routine disclosure situations examined by other researchers (Ajinkya and Gift, 1984; Ruland, Tung and George, 1990; Skinner, 1994).

1.4.3 Defensive role of profit forecasts

Takeover activity in the UK generally, and particularly in the late 1980s, is characterised by a high level of contested bids. The high level of hostile bids in the UK is markedly different from that found in most other industrialised countries (DeMott, 1988; Franks and Mayer, 1990).

Profits announcements represent a very important plank of defence. Forecasts above market expectations may render the offer price unattractive and force the predator on the defensive. It has frequently been suggested that profit forecasts are used as a defence mechanism. There is considerable anecdotal evidence that publication of profit forecasts affects the outcome of contested bids. It is assumed in takeover literature that publication of forecasts is a strategy in contested takeovers that can influence the success or failure of bids, or that can lead to increased offers.

The role played on the outcome of takeover bids by disclosure of profit forecasts is examined. Anecdotal evidence that profit forecasts are defensive weapons in contested takeover bids is empirically tested - whether disclosure of a profit forecast is an effective defence strategy by targets in defending against contested takeover bids. In addition, whether disclosure of a forecast by bidders helps bidders successfully complete contested bids is also tested.

1.4.4 Factors influencing disclosures in forecasts: content analysis

There have been many studies into disclosures in annual reports which are mainly concerned with reporting past events. Little attention has been given to disclosures in forecasts which are more forward-looking, decision-orientated statements. Montgomerie and Walker (1992) comment that '*published profit forecasts contain very little information on how the figures are built up. They range from being one line statements citing a figure that will be achieved to, at the most, three or four lines disclosing key figures with a few accompanying notes*'. Little guidance is given on the content of forecasts by the Stock Exchange or the Takeover Panel. None is provided by the accounting profession. This study provides data on current forecasting disclosure practices in the absence of any detailed regulation.

Unlike any previous study into earnings forecast disclosure, not only is the incidence of disclosure of forecasts analysed but the content of forecasts, and disclosures therein, are also examined to assess whether sufficient information is disclosed for the investor to understand and appreciate how the forecast is put together.

1.4.5 Factors influencing disclosures in forecasts: news content

Many US analytical and empirical studies of disclosure of annual earnings forecasts have focused on whether managers are motivated to disclose because of the news content of the forecasts. Evidence in the US has been mixed. This research examines whether good news or bad news is disclosed in the forecasts. The hypothesis is tested that managers are motivated to signal good news about superior prospects by disclosing profit forecasts.

1.5 Research methodology

Previous empirical research into voluntary disclosure can be divided into two categories: share price reaction studies and behavioural studies.

There are several difficulties in studying share price reactions to disclosure of profit forecasts. In some instances share prices will not be available due to

suspension of the share quotation during the takeover. Shares are suspended at the request of the company if there is a possibility of a false market arising from imperfect or unequal information available to the market. There is always a suspension of shares in the case of a reverse takeover.

During a takeover, there are so many other events occurring that it may be difficult to isolate the share reaction as related specifically to disclosure of the forecast. Variability of newspaper coverage when a forecast is disclosed will also affect the share price reaction. Some forecasts are never mentioned whereas others receive extensive coverage.

Alternatively, disclosure decisions can be looked at from a behavioural perspective. What are the trade-offs that firms, management and professional advisors have to make in deciding to voluntarily disclose?

This research uses a behavioural approach to analyse disclosure and examines factors influencing disclosure using qualitative and quantitative research techniques. Three different methodologies are used: (i) interviews, (ii) empirical analysis of disclosure/nondisclosure of forecasts, and (iii) content analysis of disclosures in forecasts.

1.5.1 Interviews

Eleven comprehensive, in depth interviews were conducted with senior company executives and advisors involved in takeovers in this research to elucidate the underlying issues and motivations for disclosure/nondisclosure of forecasts (including content of disclosures in forecasts) by bidders and targets. It was hoped that by exploring in advance the issues considered by this research with those involved in real life disclosure decisions, the resulting research design would be improved and would be more relevant to real world situations. The results of these interviews are linked subsequently to the empirical results.

1.5.2 Empirical analysis of disclosure/nondisclosure of forecasts

A cross-sectional analysis, comparing attributes of forecast disclosing and nondisclosing firms, was carried out. Three levels of variables were tested: takeover-context variables, firm-specific variables and forecast-related variables.

Takeover-context variables include year of the bid, party to the bid (target versus bidder), type of bid (contested versus uncontested), purchase consideration (paper, cash and mixed (cash and paper)) and bid horizon.

Variables suggested by signalling theory (such as quality of advising agent and news content of forecasts) and variables suggested by agency theory (such as financial leverage and managers' ownership share) were tested. Other firm-specific variables examined were size and percentage large shareholdings in the firm. Three variables were included for control purposes: listing status, industry and nationality of firms.

Takeover documents were examined for disclosure of profit forecasts. A five year period from 1988 to 1992 was chosen. The study represents a complete sample (every takeover document was examined) of all 701 UK public company takeover bids during the five year period studied. A relatively long period is necessary to ensure that there are enough profit forecasts to enable meaningful analysis. It was expected that a profit forecast would be disclosed in approximately 20% of takeover bids. In all, 250 forecasts (out of 701 - 36%) were obtained.

1.5.3 Content analysis of forecasts

A comprehensive, descriptive content analysis of disclosures made in profit forecasts was carried out. Disclosure in each profit forecast was measured in two ways: (i) the number of items disclosed and (ii) the number of assumptions disclosed in each forecast were counted. The content analysis is illustrated with examples from individual profit forecasts.

1.5.4 Statistical analysis

Various univariate and bivariate statistical tests are described in chapter 4, including Mann-Whitney U tests, Spearman correlations and chi-square statistics based on crosstabulation analysis.

Four multivariate techniques are used to analyse the results: logit analysis, OLS regression, Poisson regression and negative binomial regression. Logit analysis specifically deals with the violation of the assumptions of regression analysis arising from dichotomous dependent variables (being disclosure/nondisclosure of a forecast in this research). The technique was applied to test a disclosure model to find estimates of regression coefficients which maximise the likelihood that the pattern of forecast disclosure/nondisclosure would have occurred.

Poisson and negative binomial regression are two methods of analysing count data, such as the number of items and assumptions disclosed in forecasts. These were used, in addition to OLS regression, to analysis content of disclosures in forecasts.

Only logit and negative binomial results are reported; OLS and Poisson regression results support the negative binomial results and are not reported separately.

1.6 Regulatory framework and definitions

The legal system in the UK and Ireland is predominantly a common-law system which includes a large body of case law consisting of legal principles evolved through decisions of the higher courts over centuries. From a perusal of the standard company law texts (Pennington, 1985, for example), it is unclear what common-law duties there are requiring directors to disclose information.

Regulations concerning disclosure generally (and including disclosure of profit forecasts) by publicly quoted companies in the UK are contained in the Stock Exchange's *Admission of Securities to Listing* (the '*Yellow Book*') (International Stock Exchange of the United Kingdom and the Republic of Ireland Limited, 1995a), the Stock Exchange's '*Guidance on the dissemination of price sensitive*

information' (International Stock Exchange of the United Kingdom and the Republic of Ireland Limited, 1995b) and '*The City Code on Takeovers and Mergers'* (Panel on Takeovers and Mergers, 1993). Briefly, the regulations are as follows.

Under the continuing obligations of the listing rules, a company must notify the Company Announcements Office of '*any information necessary to enable holders of its listed securities and the public to appraise the position of the company and avoid the creation of a false market in its listed securities.*' and of '*any major new developments in its sphere of activity which are not public knowledge...*'. Further clarification of this obligation is provided by The Stock Exchange which has published guidance notes on the dissemination of price sensitive information (International Stock Exchange of the United Kingdom and the Republic of Ireland Limited, 1995b). General principle 3 of the City Code on Takeovers and Mergers requires that *'Shareholders be given sufficient information and advice to enable them to reach a properly informed decision and must have sufficient time to do so. No relevant information should be withheld from them.'* (Panel on Takeovers and Mergers, 1993).

As most previous research into forecast disclosure has taken place in the US, it is appropriate to briefly compare the regulatory environments in the UK and the US. Securities regulation is widely regarded to be more relaxed in the UK (Frost, 1995). The UK is less litigious than the US - class action suits are not allowed; lawyers do not generally work on a contingent fees basis and the loser in a legal action must reimburse the victor's legal expenses. Consequently, legal and regulatory consequences of disclosure or nondisclosure are less serious in the UK than in the US.

Chapter 2 deals with a number of papers that examine corporate disclosures in the context of shareholder litigation (Francis, Philbrick and Schipper, 1994; Skinner, 1994 and 1995). The litigation referred to in these papers arises under SEC rule 10b-5 which makes it unlawful for managers '*to make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the*

statements made, in light of the circumstances in which they were made, not misleading. This rule has been used in '*fraud on the market*' lawsuits to sue managers who are alleged to have failed to keep investors appraised of material earnings information. Managers in the US have a duty to '*correct and update*' previous disclosures if those disclosures become inaccurate, incomplete or misleading.

Because of the more general wording of the Takeover Code's general principle 3, and because litigation by shareholders is more difficult than in the US, there seems to be a lesser onus on disclosure by management in the UK.

1.6.1 Regulatory framework: takeovers

Normally a takeover is the acquisition by one company of the share capital of another company by means of cash, or by issuing loan capital, or by issuing shares, or a combination of these.

This research is restricted to takeovers of public companies quoted on the London Stock Exchange. These companies may be acquired by the purchase of shares on the Stock Exchange or by an offer to all shareholders for all or part of the target's share capital. Acquisition of a listed company by the purchase of shares on the Stock Exchange is uncommon because of legal regulations, and because the City Code on Takeovers and Mergers requires a compulsory offer once 30% of shares are acquired.

Methods of takeover in the US, where most empirical research has been undertaken, are quite different. There are several types of takeovers, including mergers, tender offers and proxy contests. In mergers, the bidder negotiates an agreement with the management on the terms of the offer for the target, and then submits the proposed agreement to a vote of shareholders. In a tender offer, a bidder makes an offer directly to shareholders to buy some or all of the stock of the target firm. In a proxy contest, a dissident group attempts, through a vote of shareholders, to obtain control of the board of directors.

For the purpose of this research, it is not necessary to distinguish between the terms *merger* and *takeover*; the term *takeover* is used all the time. This is because in many instances it is not clear whether one or the other is occurring.

In the UK, when a bidder intends to make an offer for a company, notice of that fact should be communicated to the board of the target company. The target company board must immediately inform target shareholders by press notice followed by postal notification. An offer document must be sent to target shareholders within 28 days of the announcement of terms of the offer. The board of the target company must circulate its views on the offer to its shareholders as soon as possible after despatch of the offer document.

An offer must initially remain open for 21 days after posting the offer document. If the offer is revised, it must be kept open for at least 14 days after posting the notice of revision of the offer.

Once the bidder has acquired, or has agreed to acquire, over 50% of the voting shares, the offer becomes 'unconditional'. Remaining target shareholders must within a few days either sell their shares to the bidder or remain as minority shareholders in the company.

Where the board of the target company is supporting the bid, the offer will be a recommended offer. If the directors decide to fight the bid any defending circulars must be prepared with the same standards of care as if they were offer documents.

1.6.2 Regulatory framework: profit forecasts

A profit forecast may be included in offer or defence documents. If the bid is recommended or agreed by the board of the target company, the offer document will be prepared jointly by both parties to the bid. The offer document may include a profit forecast by the target, by the bidder or by both. If the bid is resisted by the board of the target, defence documents may include a profit forecast of the target.

Generally, the rules relating to publication of profit forecasts apply equally to the directors of a target company as to the directors of a bidding company. There are few legal regulations affecting disclosure of forecasts. The UK Financial Services Act, 1986, outlaws fraudulent or reckless forecasts. The Act also contains regulations to safeguard against misleading forecasts.

The Stock Exchange and the Panel on Takeovers and Mergers have published regulations governing disclosure of profit forecasts in prospectuses and during takeovers in the UK (International Stock Exchange of the United Kingdom and the Republic of Ireland Limited, 1995a, Panel on Takeovers and Mergers, 1993).

<u>The Stock Exchange</u>

The Stock Exchange's *Admission of Securities to Listing* (the *'Yellow Book')* regulates disclosures in prospectuses for new issues of shares and in connection with acquisitions, takeovers and mergers. Chapter 12, paragraphs 12.21 to 12.27 deal with profit forecasts. The Stock Exchange does not require publication of profit forecasts, but sets out certain regulations where a forecast is disclosed.

Any profit forecast or estimate of results published must be reported on by the auditors/reporting accountants and the financial advisors to the bid. The principal assumptions must be stated - but only those relating to matters outside the control of the directors, and which could have materially affected achievement of the forecast. Profit 'estimates', which relate to a period expired, may only be subject to assumptions in exceptional circumstances. Dividend forecasts must be treated

as profit forecasts where the issuer has a known policy of relating dividends to earnings, or where the dividend forecast otherwise implies a forecast of profit.

Where a company has made a profit forecast, and subsequently becomes aware that the outcome will be materially above or below the forecast figure, a further announcement concerning the forecast should be made (International Stock Exchange of the United Kingdom and the Republic of Ireland Limited, 1995b).

City Code on Takeovers and Mergers

The inclusion of profit forecasts in documents relating to takeovers is governed by the City Code on Takeovers and Mergers, which applies to takeovers of listed and unlisted public companies, but not to private companies. The Panel on Takeovers and Mergers, set up in 1968 by the Bank of England, interprets and enforces the Code.

The provisions of the City Code relating to publication of profit forecasts are set out in section K, Rule 28 of the Code. Neither the City Code nor the Panel, with one exception, compels directors to make a forecast. Rule 28.6 (b) states that profit forecasts made before the commencement of the offer period should be reported on. Thus, some forecasts are included involuntarily in takeover documents because of rule 28.6 (b). The City Code also insists (Rule 28.6 (c)) that figures already published in relation to a current financial period be reported on in the same way as a profit forecast. These are called profit 'estimates'.

The City Code makes it clear that sole responsibility for forecasts rests with directors. Nonetheless, forecasts must be reported on by independent accountants and the company's financial advisors.

Under the City Code, offers do not have to stay open for more than 21 days from the date of posting the offer document. This usually means the defending side has 10 to 14 days to issue a reply which may include a profit forecast. Thus, forecasts made by targets in contested bid situations are usually done under considerable time pressure. There is a danger that defending companies may delay their formal

forecasts, while urging shareholders not to take action until they have seen them. This is contrary to the Code, which requires shareholders to have information in good time.

Rule 28 contains the requirements in relation to profit forecasts. Rule 28.1 Standards of Care states '*There are obvious hazards attached to the forecasting of profits; but this should in no way detract from the necessity of maintaining the highest standards of accuracy and fair presentation in all communications to shareholders in an offer*'.

All forecasts are subject to an accountant's report, with the exception of a forecast made by a bidder offering cash only (rule 28.3(a)). The reporting accountants must satisfy themselves that the forecast, so far as the accounting policies and calculations are concerned, has been properly compiled on the basis of assumptions made. Any financial advisor mentioned in the document must also report on the forecast. These reports must, under Rule 28.4, appear in the document containing the forecast, together with statements of consent from those making the reports.

The City Code also influences the content of forecasts. Under Rule 28.7, when a forecast of profit before taxation appears in a document to shareholders, forecasts of taxation, extraordinary items and minority interests must be included (where these are expected to be significant). In relation to forecast periods where trading has commenced, Rule 28.8 requires that previously published profit figures, which are available in respect of any expired portion of that trading period, together with comparable figures for the preceding year, must be stated. A forecast of dividends is not normally considered to be a profit forecast, but will be where accompanied by an estimate of dividend cover.

Rule 28.2 states that any document in which the forecast appears must reproduce the assumptions, including commercial assumptions, on which the forecast has been based.

1.6.3 Definitions

Profit forecast

The term *earnings forecast* (commonly used in the US) and *profit forecast* (commonly used in the UK) will be used interchangeably in this research.

Neither the Stock Exchange's '*Yellow Book*' nor the City Code define the term 'profit forecast'. If directors make a statement about prospects of the company, that projection, even though not quantified, may be deemed a profit forecast if the company subsequently becomes involved in a takeover bid. A profit forecast may encompass published but unaudited profit figures (usually referred to as a profit estimate). Forecasts made with the publication of interim results may be treated as profit forecasts, and may have to be reported on if a bid is subsequently made.

All statements on earnings in takeover documents formally reported on by accountants/financial advisors as profit forecasts or profit estimates are treated as profit forecasts in this research.

Contested bid

Previous UK studies have used various definitions for 'contested' and 'hostile' bids. Newbould (1970) and Buckley (1972) classified takeovers and mergers as agreed/unopposed, defended (where the directors oppose the bid and recommend its rejection to the shareholders of the target company) and competitive (where there are rival bidders). Pickering (1978), Holl and Pickering (1988) and Franks and Harris (1989) defined a contested bid as one where there were two or more bidders for the same target. Limmack (1993) categorised each acquisition into one of three categories ('competing', 'contested', 'uncontested') according to whether there was evidence of bid resistance or not. Two potential sources of bid resistance were identified:

- Resistance from target company shareholders that necessitated increased offers (internal resistance - called 'contested').

- Acquisitions in which a competing bid was received from a third party (called 'competing' resistance).

This research adopts the analysis of bids by *Acquisitions Monthly* which, until recently, categorised bids as uncontested, contested (meaning there was bid resistance from the target company or a third party) and other bids (white knights). Thus, contested bids are defined in this research as bids that were *initially* rejected by target management on first approach by the bidder. Contested bids may involve more than one bidder. More recently, *Acquisitions Monthly* has added a new category for bids initially contested by the target but later agreed. This category was formerly classed as a contested bid.

1.7 Costs and benefits of disclosure

Understanding costs and benefits of disclosure can assist policy makers in the wider disclosure regulation debate. This research attempts to understand the costs and benefits of disclosure of profit forecasts during takeover bids. But, as Elliot and Jacobson (1994) point out, cost-benefit analysis of disclosure is limited in its effectiveness by the complexity of social decision making. They add that research on costs and benefits of disclosure could be helpful, but recognise that at present there are no agreed measures of costs and benefits.

<u>Benefits</u>

Information disclosed affects outsiders' perceptions of firms' economic condition and future prospects. Lev (1992) comments that undervaluation of shares (arising from non-disclosure) can increase cost of capital but may also draw the attention of corporate acquirers, causing managers to spend time and resources averting takeover. To support his point, Lev uses the takeover battle for Sea Containers (a bid included in this study) by multiple bidders as an example and quotes from the 1989 annual report, '*Investors had not perceived that the shipping recession of the mid 1980s had passed and the company was entering a period of excellent earnings growth*'. Lev comments that undervaluation of the company, and the consequent costly fight to defend the takeover, could have been avoided by

effective and timely communication to investors of the true value of Sea Containers and its favourable prospects. Elliot and Jacobson (1994) also identify the benefit of lower cost of capital from disclosure although, in practice, this is difficult to prove empirically.

Agency theory postulates that firms' values are permanently depressed by the cost of the agency relationship. The magnitude of these costs and consequent depression of market values vary considerably across firms, depending on, among other things, the costs and difficulties outsiders encounter in evaluating (monitoring) managers' performance. A disclosure strategy can not only narrow the information gap, but will create shareholder value by decreasing the agency costs which depress values.

Information disclosure can create value in two ways: (i) directly, by narrowing the information gap (asymmetry), thereby decreasing investors uncertainty about the firm (agency costs); (ii) indirectly, by enhancing value-creating activities through a reduced cost of capital and improved suppliers' and customers' terms of trade.

Costs of disclosure

Costs of disclosure fall into two categories:

- Direct costs of processing and disseminating the information. Information (such as profit forecasts in this research) may require independent certification and validation. These costs are measurable.
- Indirect costs, including those arising from the impact of disclosures on company decisions and activities, those arising from the impact of disclosures on competitors or from potential litigation costs arising from disclosure. These can be substantial, yet no systematic evidence exists about the magnitude of these costs.

More recent US research has begun to highlight litigation costs as being particularly important (Francis, Philbrick and Schipper, 1994; Skinner, 1994 and 1995; Elliot and Jacobson, 1994). Costs may vary across types of disclosure,

particularly potential legal costs, because certain types of disclosure (nondisclosure) may provide a more ready basis for law suits than others (Skinner, 1994). It is questionable whether a "no voluntary disclosure" policy is a safeguard against litigation. While firms are under no general affirmative duty to disclose material new developments (except for those specifically required by law and regulations) they have a duty to update or correct any previous disclosures made, if those disclosures become inaccurate, incomplete or misleading. Thus, a strict no disclosure policy is no safeguard against litigation.

Assessing these parameters is difficult. Information disclosure often exerts simultaneous and contradictory effects on various shareholder groups and constituents. For example, a favourable forecast will generally have a favourable effect on capital markets, yet might adversely affect labour negotiations. Cost-benefit analysis of disclosure strategy should simultaneously consider the effects of disclosure on *all* the firms' major stakeholders and constituents.

Costs and benefits of disclosure are considered throughout this thesis. In chapter 2, analytical models of disclosure consider benefits from the point of view of market value of securities, and costs including direct costs and proprietary costs of disclosure. The interviews in chapter 5 and appendix 2 also refer frequently to cost and benefit issues. That cost and benefit considerations play a major role in the decision to disclose is not disputed. However, it has not been possible to empirically test the influences of cost and benefit issues on disclosure.

1.8 Contribution of this research

The scope, size, extent and depth of this study will provide a large data base of information on takeover bids: on firm characteristics of bidders and targets; on views of a variety of participants in takeover bids; on disclosure of profit forecasts during takeover bids; and on the form and content of a large group of forecasts. This data base will provide valuable information and insights both to researchers and to firms, advisors and the business community involved in takeover bids.

This research will contribute to existing research on voluntary disclosure in a number of ways. The research will extend the scope of previous voluntary disclosure studies to a new disclosure situation - that of takeover bids. It is hoped that this will provide new insights into the managerial incentives involved in providing information in specialist settings. The *a priori* analysis of motivations to disclose profit forecasts, set out in paragraph 1.2, is based on the assumption that decisions to disclose forecasts are likely to be influenced by a single dominant consideration - namely whether disclosure will materially assist forecasters' prospects of success. Given a pattern of very rare routine disclosure of profit forecasts in the UK, prior research, largely based on routine disclosure, is considered unlikely to fully explain motivations to disclose profit forecasts during takeover bids.

There have been few empirical studies of disclosure in UK academic literature. Exceptions are Barrett (1976), Choi (1973), Firth (1979, 1980, 1984), Gray (1978) and Gray and Roberts (1989). All these papers have dealt with voluntary disclosure in annual financial statements.

There has been little research in the UK into voluntary disclosure of earnings forecasts. All recent UK research has focused more on the accuracy of profit forecasts than on the disclosure decision. Voluntary disclosure theories will, for the first time in the UK, be applied to voluntary disclosure of profit forecasts. Almost all research to date on voluntary disclosure of earnings forecasts has been conducted in the US in respect of annual earnings forecasts disclosed voluntarily by management and reported in, say, *The Wall Street Journal*. Frost and Pownall (1994) document differences in disclosure practices by firms listed in the US and in the UK. They comment that some of the differences are surprisingly large, such as the much higher incidence of forecast disclosure in the US. In their study, management forecasts were released relatively frequently in the US, by both US and foreign (non-US/UK) firms, but rarely by UK firms. Forecasts were disclosed much less frequently in the UK. Of 114 forecasts disclosed by cross-listed firms, only 19 were disclosed by cross-listed UK firms. These results would suggest that US research findings cannot be generalised to the UK.

Most US studies of forecast disclosure include only point or range forecasts. The present research comprises an exhaustive sample of forecasts disclosed during a five year period and includes qualitative and upper/lower bounded forecasts, as well as point and range forecasts.

The importance and relevance of signalling theory and agency theory to the takeover-related disclosure decision will be assessed. It is expected that these theories will not provide good explanations of motivations for disclosure in the specialist context of takeover bids. These two theoretical models have tended to be empirically tested separately in the literature. Examining the two theories in a single study may provide fresh insights into firms' voluntary disclosure decisions.

This research will for the first time analyse the content of disclosures in profit forecasts. Previous research on profit forecasts (mainly US) has limited analysis to the decision to disclose or not to disclose. This study extends previous content of disclosure studies from annual reports to forecasts. A large data base of examples from profit forecasts has been prepared (included in appendix 4). This data base will provide useful precedent material for researchers and practitioners.

Methodology

This study will extend previous methodology in a number of ways.

In addition to empirical quantitative research techniques, this research will explore in advance, through interviews, the issues to be empirically researched in an effort to make the research design as relevant to real life situations as possible. While this does not guarantee that the design is ideal, some effort has been made to make it as apposite as possible.

Because the date of takeover bids can be ascertained, bid horizon can be measured and compared for forecasters and nonforecasters. Previous research, based on routine disclosures, has only been able to measure forecast horizon. As

this cannot be calculated for nonforecasters, the horizon for forecasters and nonforecasters has not been compared in most prior research.

Most studies use a single method of analysing deviations from market expectations. This research adopts two methods of analysis: (i) analysis of differences in number of firms classified between positive and negative deviations from market expectations; and (ii) analysis of rankings of differences in deviation from market expectations between forecasters and nonforecasters.

The definition of outcome of bids is extended to include whether the offer price increased during the bid, as well as success/failure of bids. In addition, the effect of publication of forecasts on outcome of bids is considered for agreed bids, as well as contested bids (the normal focus of takeover defence studies). This study, unlike others, also considers whether publication of a forecast by bidders makes any difference to the outcome of bids.

Content of disclosures in forecasts are measured by counting items and assumptions disclosed. Statistical methods suitable for count data are applied in analysing the results. This is the first time such count data methodology has been applied in an accounting study.

1.9 Organisation of the thesis

This study is organised as follows. Chapter 2 contains a review of the literature which is dealt with in two parts. The first part summarises the theoretical research on disclosure, taken mainly from information economics literature. This literature is concerned with developing models to explain the disclosure of information where there is information asymmetry - where managers know more about the firm than outside investors. Implications of signalling theory and of agency theory to the disclosure decision are outlined.

The second part of chapter 2 deals with the empirical research to date on disclosure. Empirical studies are summarised under the five issues addressed by the research:

- Empirical research on voluntary disclosure, including disclosure of forecasts;
- Empirical research on the effect of prevailing market expectations on disclosure of forecasts;
- Studies of the role of profit forecasts in defending takeover bids;
- Content analysis studies, mainly of annual reports;
- Evidence of news content of forecasts.

As this thesis is concerned primarily with disclosure and forecasts, only directly relevant literature on the market for corporate control and on takeovers is reviewed.

Chapter 3 outlines the research questions to be addressed. From these, 34 hypotheses are developed and justified.

The population, sample and data collection are described in chapter 4. The research methodology used to carry out the study is outlined. The variables to be tested are identified, and a detailed operational definition for each variable is then developed. The chapter concludes with details of the statistical tests carried out.

Chapter 5 presents and summarises eleven interviews conducted in support of this research. Chapter 6 presents and summarises the results of analysis of disclosure/nondisclosure of forecasts. Chapter 7 contains the results of a content analysis of disclosures in profit forecasts. Chapter 8 summarises the findings and discusses possible implications of the research. The limitations of the research and some suggestions for future research are also considered.

Chapter 2: LITERATURE REVIEW

This research is concerned with the reasons why firms involved in takeover bids (whether bidders or targets) disclose profit forecasts during the bid. Existing studies are concerned with motivations for disclosure in on-going business situations (including periodic management disclosures and in periodic company reports).

Various rationales have been advanced to explain voluntary disclosure. Two predominate: signalling theory and agency theory. Both theories provide explanations for voluntary disclosure of information by companies. Takeover bids provide a setting for analysing agency relationships since the best interests of the principal (shareholders) and agent (management of bidders/targets) are often in conflict, particularly for target companies.

Some analysis of agency theory and signalling theory is considered appropriate to this research. However, given the specialist setting of takeover bids, these theories are unlikely to provide full explanations of motivations for disclosure of profit forecasts. The takeover context is one in which, intuitively, one would posit that the dominant motive for disclosure is to enhance the bidder's prospect of acquiring the target, or to enhance the target's prospect of resisting the bid or of increasing the offer price.

It is possible that firms modify their disclosure behaviour during a takeover. Firms that do not normally disclose information may do so during a takeover bid. Alternatively, firms with a pattern of extensive disclosure may rely on previous disclosures (thus the market knows enough about the firm) and may not make any additional disclosure at the time of a takeover bid. A company in the habit of disclosing profit forecasts may be more vulnerable to a bid, as such a company would find it difficult to make a more optimistic forecast at the time of a bid.

In addition to agency and signalling explanations for voluntary disclosure, there is

a large body of research contained in information economics literature which attempts to explain voluntary disclosure using analytical models. Most of these models do not currently provide easy theoretical bases from which testable empirical research hypotheses can be developed. Nonetheless, these analytical models, while describing overly simplistic scenarios not reflected in the real world, provide useful insights into some of the factors that might influence management in deciding whether or not to disclose.

Consequently this chapter begins with a brief summary of information economics literature relevant to voluntary disclosure decision-making. This is followed by a review of agency theory and of empirical research into voluntary disclosure applying agency theory. A review of signalling theory follows, including relevant empirical signalling research.

Takeover literature and the literature on the market for corporate control is not reviewed, except to the extent that such research is directly relevant to the thesis. The main body of empirical research is reviewed under five headings derived from the five research issues considered by this study and outlined in chapter 1. This chapter reviews the literature on disclosure; on disclosure of forecasts; on the influence of market expectations on disclosure of forecasts; on takeover defence strategies; on content of disclosures in forecasts; and on news content of forecasts.

2.1 Analytical models of disclosure

Various theories exist to explain management disclosure choices in terms of social, economic, behavioural and/or technological factors. These theories are not mutually exclusive.

Economic theory suggests that, in the absence of mandatory disclosure, firms will disclose information to the extent that marginal benefits will be equal to the costs of disclosure. Much of the literature has shown that benefits of disclosure can outweigh the costs. The main benefit of disclosure is enhancement of firm value in

terms of increased share price. Additional direct and indirect costs arise from disclosure. Disclosure may lead to risk of claims from employees, trade unions and taxation authorities. Likely indirect costs of disclosure could include the provision of proprietary, price-sensitive information to competitors or, alternatively, encouragement of a new entrant to an industry. For example, if the news is bad the firm may wish to avoid the consequent adverse market reaction, but there is also the potential benefit of disclosing bad news as a means of discouraging entry to the market by competitors. Thus, voluntary release of proprietary information is seen as a strategic decision and must take into account the likely reaction of other players. Such direct and indirect costs may be lower in the case of large firms.

2.1.1 Voluntary disclosure models

Table 2.1 provides a summary of analytical models of voluntary disclosure.

Full disclosure of private information based on adverse selection arguments

Early literature on voluntary disclosure, where the firm is only concerned with its market price, shows (contrary to observed practice) that there is sequential disclosure with full equilibrium (Akerlof, 1970; Grossman, 1981; Milgrom, 1981). If there are no costs associated with disclosure, a manager is always forced to disclose what he knows; otherwise external parties anticipate the worst. These models assume that the information is common knowledge and that external parties are rational.

Akerlof's (1970) paper was one of the first to investigate the economics of unevenly distributed information. He showed how markets break down when potential buyers cannot verify the quality of the product they are offered, using the used car market as an example. In the market for goods and services, sellers adopt a policy of full disclosure because, in the absence of information, buyers will assume the least favourable belief possible. Problems of 'adverse selection' (or, as Akerlof has called it, the 'market for lemons' problem) arise if there is no way for buyers to learn about sellers' quality. This will force all items to sell at the

Table 2.1 Summary of analytical models of disclosure

Study	Findings
<u>Full disclosure of private information based on adverse selection arguments</u>	
Akerlof (1970)	In the market for goods and services, sellers adopt a policy of full disclosure because, in the absence of information, buyers will assume the least favourable belief possible. The model is one of sequential equilibrium with full disclosure.
Grossman (1981)	Concludes that possessors of superior information are obliged to follow full disclosure to distinguish themselves from agents who possess the worst possible information. The only equilibrium is one of full disclosure.
Milgrom (1981)	Shows that firms with good news/superior information will disclose it to distinguish themselves from the least favourable information pertaining to the firm. Consequently, firms are obliged to follow full disclosure.
Milgrom & Roberts (1982)	Established firms attempt to influence the entry of competitors to a market by lowering pre-entry prices. The entrant will allow for limit pricing in making his entry decision. The conclusion of the model is that established firms' actions cannot systematically bias entrants' expectations.
Myers & Majluf (1984)	A firm must disclose information to convince investors that it is not selling shares because it knows the price is too high. Thus, a firm may refuse to issue common stock and thus pass up valuable investment opportunities, may tend to rely on internal sources of funds, on debt rather than on equity when in possession of valuable proprietary information which it does not wish to disclose.
<u>Models including proprietary costs</u>	
Verrecchia (1983)	Proprietary costs of disclosure are included in this model which results in a threshold level of disclosure arising from a trade-off between disclosure of good news and the proprietary cost of such disclosure.
Dye (1986)	A theory of disclosure is developed which includes both proprietary and nonproprietary costs. The model shows that nondisclosure or partial disclosure may be optimal.

Table 2.1 Summary of analytical models of disclosure (continued)

Study	Findings
<u>Models including proprietary costs (continued)</u>	
Verrecchia (1990a)	Develops a model based on Verrecchia (1983) which demonstrates that higher quality information implies more disclosure.
<u>Models including the influence of external parties</u>	
Dye (1985)	Dye's model includes the possibility that investors are unaware of the information endowments of management and are not sure whether nondisclosure is due to nonpossession of the information or because the information carries bad news.
Jung & Kwon (1988)	Extend Dye's (1985) model to allow outside investors to revise their probabilities that managers have received no outside information in the absence of disclosure. This resolves the problem of multiplicity of partial disclosure policies of Dye's model.
Dontoh (1990)	Develops a model based on endogenous rather than exogenous disclosure costs. By dividing firms into two types, the model shows that firms may voluntarily disclose bad news depending on the distribution of firm types and on the existence of endogenous and exogenous costs.
Darrough & Stoughton (1990)	This model includes potential entrants to the market as well as the firm and investors. Full disclosure, partial disclosure and nondisclosure equilibria are developed depending on whether the information disclosed is favourable or unfavourable and on whether the costs of entry to the firm's market are high or low.
Verrecchia (1990b)	Queries the conclusions of Darrough and Stoughton (1990) on the basis that full disclosure is never eliminated by their model which is at odds with firm disclosure practice.
Wagenhofer (1990)	This model consists of three players, the firm, investors and an opponent. Disclosure is a trade-off between the adverse action taken by an opponent resulting from disclosure or nondisclosure and the effect on market price of disclosing favourable information.

Table 2.1 Summary of analytical models of disclosure (continued)

Study	Findings
Models including the influence of external parties (continued)	
Teoh & Hwang (1991)	Predict that disclosure will be strategically timed. A high quality firm may not disclose unless it has bad news to impart, which helps distinguish itself from low-quality firms. A low quality firm strongly prefers not to disclose unless it has good news.
Newman & Sansing (1993)	Consider managerial disclosures to shareholders and competitors and conclude that some public disclosures will be deliberately inexact.
Gigler (1994)	Shows that proprietary costs can increase voluntary disclosures by supplying credibility to unaudited disclosures.
Dye and Sridhar (1995)	Attempt to explain why disclosures by some firms provoke other firms to make similar disclosures ('herding'). As more firms receive information, the probability that *all* firms eventually disclose increases. Firms are shown to tend to release good news earlier than bad news.
Models including private information acquisition	
Diamond (1985)	Develops a positive theory of unconditionally releasing information voluntarily which makes all traders better off because traders would have no need for private information acquisition and because public information makes traders' beliefs more homogeneous, which improves risk sharing.
Bushman (1991)	This model contrasts with Diamond (1985) and shows that the value of public disclosures to traders varies dramatically with the structure of the private information market which is crucial in determining investor demand for disclosure.
Alles & Lundholm (1993)	Revisit the work of Diamond (1985) and present three different models of how welfare will change in response to public information.
Other models	
Indjejikian (1991)	Examines how investor ability to interpret accounting information affects firm disclosure decisions and suggests that a firm disclosure, in conjunction with investors' interpretation of the information, can give rise to risk-sharing benefits.

same price. If sellers of good quality items cannot distinguish themselves from sellers of low quality items, then low quality sellers will tend to hide their quality. Grossman (1981) and Milgrom (1981) conclude that the possessor of superior information is always obliged to follow full disclosure. Grossman (1981) shows that the information asymmetry problem can be alleviated somewhat if the seller is able to offer some kind of guarantee to the buyer as an indicator of the quality of the goods offered. He considers the role of warranties and suggests that guarantees against breakdown can serve as a substitute for guarantees regarding quality. Milgrom (1981) introduces a notion of 'favourableness' of news and applies it to four simple models which show (*inter alia*) that the arrival of good news about a firm's prospects always causes the share price to rise.

Milgrom and Roberts (1982) develop a model based on limit pricing. An established firm may be able to influence, through its pricing policy, other firms' perceptions of the profitability of entering the firm's markets. A firm may thus set its prices below the short run maximisation levels in order to deter entry. Potential entrants allow for limit pricing in making entry decisions. Thus, in equilibrium, established firms practice limit pricing, but entrants are not fooled by this strategy.

Myers and Majluf (1984) give an account of the 'lemon-like' properties of common stock financing under conditions of asymmetry of information to explain why, in practice, share prices generally fall after an issue. They consider a firm that must issue common stock to raise cash to undertake a valuable investment opportunity. Management is assumed to know more (information asymmetry) about the firm's value than potential investors. If management know that the value of assets is greater than the market capitalisation (because the inside information is so favourable), acting in the interests of existing shareholders, management will refuse to issue shares even if it means passing up good investment opportunities, because the cost to existing shareholders of issuing shares at bargain prices may outweigh the project's net present value. If the firm decides not to issue and not to invest, then real capital investment is misallocated and firm value reduced. This explains why firms might want to have sufficient resources available (raised before information arises) so that all investments can be financed internally.

Disclosure models including exogenous proprietary costs

Earlier models of full disclosure equilibrium are not supported by empirical evidence. Later articles introduce exogenous disclosure costs into the voluntary disclosure model to show that there is never a full disclosure equilibrium and, more consistent with actual disclosure practice, there exists partial disclosure equilibrium with only favourable information being disclosed. For very high exogenous disclosure costs this extends to a nondisclosure equilibrium.

Verrecchia (1983) developed a model of discretionary disclosure in which exogenous disclosure costs are imposed on the firm if competitors, dissident shareholders or employees can use the information in a way that harms the firm's prospects. Proprietary costs of disclosure increase the range of interpretations which can be drawn by investors and others from a decision by a manager not to disclose information. There is no longer an unambiguous implication that information withheld is unfavourable. The introduction of exogenous disclosure costs and gains creates uncertainty as to whether the firm withholding information has observed a signal that it prefers to disclose, but disclosure costs are too high, or has observed a signal that it wishes to keep private. The existence of a proprietary cost has the significance that the rational expectations trader does not know whether the information is withheld because it is bad news, or because it is good news but not sufficiently good news to warrant incurring the proprietary cost.

The model suggests that as proprietary costs increase, so does the threshold level of disclosure. This is because the range of possible favourable interpretations of withheld information increases, thereby allowing the manager greater discretion.

Dye (1986) presents a theory of disclosure which takes into account both proprietary and nonproprietary information and which explains selective disclosure of management's information. Most previous research concluded that full disclosure is optimal. These studies only included nonproprietary information.

Dye shows that when managers are endowed with both proprietary and nonproprietary information nondisclosure or partial disclosure may be optimal.

Verrecchia (1990a) shows how a change in quality of information received by a manager affects the manager's threshold level and probability of disclosure. Previous research dealt with the relation between the manager's incentives to disclose and the realisation of the manager's private signal (e.g. whether the information is good or bad news) and not the quality of the signal *per se*. Information of higher quality implies more disclosure, holding realisations fixed. A manager's incentive to disclose or withhold is motivated in part by the market's expectations in the absence of information. As the quality of information increases, the market exerts more pressure on the manager to disclose the information. This induces the manager to reduce the threshold level of disclosure below the one he adopts when the information is of lower quality.

Reaction of external parties to disclosure

Other discretionary disclosure theories suggest that a manager's decision to voluntarily disclose information is influenced by how external parties without access to information (e.g. competitors, shareholders, potential takeover specialists) would interpret its absence.

Dye (1985) notes that the existence of private information is uncertain from the perspective of external parties. This uncertainty provides the 'noise' that supports the withholding of information in the same fashion that the existence of proprietary costs provides 'noise'. Dye (1985) puts forward two suggestions (which he calls the '*disclosure principle*' and the '*revelation principle*') why management might withhold information which is nonproprietary.

The disclosure principle is based on the argument of adverse selection. Shareholders prefer managers to adopt policies that increase the current value of their shares. Shareholders will encourage managers to suppress information which is unfavourable to the firm's value. But if investors know that managers have information which has not been released, they will infer that the current market

price overstates the firm's value, based on the (unfavourable) information withheld and will revise downward demand for the shares and consequently market price. Thus, a manager is encouraged to disclose information to distinguish it from the worst information he could possibly have. Managers disclose all of their nonproprietary information, good or bad, to prevent the price of the firm's shares from plummeting.

The revelation principle explains the construction of accounting-based contracts and states that any contract can be written in such a way that induces full revelation of all private information held by the parties to it, without affecting the payments they receive. However, it gives rise to a major anomaly when applied to voluntary disclosure since it implies that full disclosure is always compatible with optimal resource allocation. This model does not explain the nondisclosure of information, such as annual forecasts, which investors know that managers possess.

Jung and Kwon (1988) extend Dye's (1985) model to allow, in the absence of disclosure, outside investors to revise their probabilities that managers have received no private information. Their model enables more general results than Dye (1985). If investors believe that the likelihood of managers receiving information increases as time elapses then, on average, unfavourable (favourable) news is contained in late (early) announcements. They also show that investors' information acquisition from independent sources may trigger the release of information that would otherwise be withheld by managers.

Dontoh (1990) provides explanations for seemingly anomalous behaviour whereby firms voluntarily disclose unfavourable information that results in significant market price declines. This contradicts previous models which suggest that firms voluntarily disclose information only when the disclosure is expected to have a positive effect on share price. Dontoh considers that this is due to the restrictive assumption that firms' objectives are to maximise current stock price rather than current cash flow (expected future market value). By allowing for the possibility that firms may choose to maximise either expected current stock price

or expected future market value (cash flow), Dontoh demonstrates the existence of a voluntary disclosure equilibrium where firms voluntarily disclose unfavourable and favourable information.

Dontoh's model suggests that the likelihood of observing a favourable or unfavourable earnings forecast depends on the distribution of firm types and the level of endogenous and exogenous proprietary costs and gains associated with disclosure. The level of endogenous disclosure costs and gains depends on the extent of intra-industry information transfers and resulting reactions of firm's competitors. The nature of information disclosed depends on the distribution of firm types.

Darrough and Stoughton (1990) develop a model of proprietary information which, if disclosed, provides strategic information to potential competitors but can be helpful to the financial market in valuing the firm more accurately. A firm with favourable information wants to disclose it to raise its market valuation but otherwise does not want to make it known to a potential market entrant. A firm with unfavourable information would rather not disclose it to the financial market but may wish to communicate it to the potential entrant to discourage entry. The financial market has rational expectations, taking into account its conjecture on the firm's incentives to disclose and the entrant's reaction in the product market. A firm may voluntarily disclose unfavourable information to discourage entry, yet the financial markets react positively.

An implication of Darrough and Stoughton's model is that competition through threat of entry encourages voluntary disclosure. Verrecchia (1983), however, suggested the opposite. More disclosure takes place in less competitive industries (because proprietary costs are lower); alternatively, product market competition may provide disincentives for voluntary disclosure. Darrough and Stoughton's model predicts that competition *encourages* full disclosure. This apparent contradiction may be because Verrecchia might have based his conclusion on proprietary disclosure being greater in more competitive situations and that competition discourages voluntary disclosure in a market where competitors have

already entered. Darrough and Stoughton's model only considers pre-entry competition.

Verrecchia (1990b) comments that the possibility of full disclosure is never eliminated from Darrough and Stoughton's (1990) model which is at odds with the fact that we constantly observe delays and withholdings in the dissemination of information. Also, according to Verrecchia, the entry game gives exaggerated benefit to bad news in two ways. It exaggerates the usefulness of bad news as a signal to discourage market entrants, and it exaggerates the positive effect of bad news by ignoring the costs to managers associated with attempts to terminate their tenure in the wake of bad news, in the form of hostile takeovers or, internally, in the form of shareholder approval.

Wagenhofer (1990) analyses disclosure strategies which are valuable to both the financial market and an opponent. He includes reactions of competitors to disclosure which mainly results in partial disclosure equilibrium. In his models he also tries to explain observed practice of disclosure of bad news in certain circumstances.

Disclosure is a trade-off between two forces: (i) proprietary cost of an opponent's adverse action in response to favourable information and (ii) high market price which can be induced by disclosing favourable information. A firm is better off not disclosing information until the information is sufficiently favourable so that the market price outweighs the proprietary costs. Introducing proprietary costs that depend on a strategic action chosen by an opponent may nonetheless result in full disclosure equilibrium. The driving force behind this is sceptical beliefs held by the opponent and the market. There never exists a nondisclosure equilibrium.

Teoh and Hwang (1991) claim to enhance existing models by including '*scepticism of an excessive desire to impart information*'. They interpret an over-enthusiasm for publication of good news as a possible indicator of the likelihood of little further good news in the future. Based on this premise, their model suggests that firms may have a preference to withhold favourable, nonproprietary

information and disclose bad news voluntarily. Teoh and Hwang's model differs from previous models in explaining some empirical observations, such as why firms withhold favourable information for no apparent reason.

Newman and Sansing (1993) consider the reaction of competitors to disclosure using '*cheap talk*' models in which disclosures are no longer constrained to be truthful. Their model shows that managers will at times be deliberately inexact in their disclosures.

A key assumption in Gigler's (1994) model is that firms wish to mislead capital markets and, consequently, credibility of disclosures is an issue. Disclosures to capital markets or competitors cannot be credible. Trading-off the benefits of disclosure to capital markets against the proprietary costs of disclosure to competitors can make the firm's equilibrium disclosures believable and informative to both groups. Gigler shows that proprietary costs provide the impetus for disclosure by supplying credibility to unaudited disclosures.

Dye and Sridhar (1995) develop a model that attempts to explain the 'herding' behaviour of firms where disclosures by some firms seem to provoke other firms to make related disclosures. Managers are assumed to make value-maximising disclosures rather than be concerned with product market, proprietary considerations. The model shows that the probability that firms will disclose information increases as more firms receive the information.

<u>Models including private information acquisition</u>

Diamond (1985) develops a model of voluntary disclosure which shows that in many circumstances the voluntary release of public information makes all traders better off. This occurs because some traders would acquire costly private information in the absence of public disclosure. Disclosure is shown to drive out private information acquisition. Assuming that the information production cost to the firm is no greater than that faced by traders, the optimal policy is to release the smallest amount of information which will eliminate private acquisition. The value of public release is that it homogenises information and eliminates use of

resources to produce private information. All traders are made better off. There are two components to the beneficial release of public information to investors. Savings of real resources can be made which would be devoted to private information acquisition if public information were not released. Secondly, improvement in risk-sharing occurs because public information makes traders' beliefs more homogeneous and reduces the magnitude of speculative positions which informed traders take.

Bushman (1991) develops a model which, in contrast to Diamond (1985), shows that the value of public disclosure to traders varies with the structure of the private information market. Whereas Diamond shows that traders unanimously demand public release of information, Bushman demonstrates that, in certain circumstances, such disclosure can generate adverse risk-sharing effects that reduce traders' expected utility overall.

Alles and Lundholm (1993) show how traders' welfare will change in response to public information, taking into account both the direct effect of the public signal and its indirect effect due to the change in private information acquisition. They show that uninformed traders do not necessarily prefer to use public signals to eliminate incentives to acquire information. Uninformed traders prefer this solution only when they are in the minority - the loss in risk-sharing opportunities that accompany the public signal outweighs the benefit of informational parity. By resolving uncertainty prior to the opening of speculative markets, the public signal reduces the opportunities to share risk.

Other models

Indjejikian (1991) examines how investor ability or sophistication in interpreting accounting information affects firm disclosure decisions. These interpretation costs are generally not recognised in the theoretical literature, where typically an information disclosure is represented as a common information signal costlessly observed by all. The analysis suggests that firm disclosure, in conjunction with investors' interpretation of the information, can give rise to risk-sharing benefits which exceed the costs attributed to a reduction in the level of market-wide

consensus. It is shown that less sophisticated investors benefit from better quality disclosure. Unsophisticated investors, facing higher costs of information interpretation, place greater reliance on common information sources (e.g. prices) which implies diminished opportunities for risk-sharing since there will be greater market-wide consensus. Increasing the quality of firm disclosure, to the extent that it triggers greater private interpretation of the information, implies greater reliance on personal sources of information thereby decreasing market-wide consensus and potentially improving investor welfare.

Concluding comments

Analytical models of disclosure are useful in improving our understanding of costs and benefits of disclosure. These models depend on basic assumptions resulting in a rather simplistic depiction of the world. For example, theoretical models usually involve an individual decision maker. In practice the decision to disclose is made by a board of directors or by a group of managers, with input from advisors. The interviews in chapter 5 and appendix 2 emphasise that a major cost of disclosure is lost reputation if the forecast is wrong. Theoretical models have not included these costs and generally consider single period costs and benefits rather than long run effects of lost reputation.

2.2 Signalling theory

The analytical and empirical literature on signalling theory is summarised in table 2.2. The signalling literature posits that entrepreneurs of high-quality firms can credibly communicate their private information to investors and thereby receive above-average market valuation by undertaking actions that lower quality firms find too costly to mimic. Managers of higher quality firms have incentives to signal to the market their higher quality to distinguish themselves from average or lower quality firms. One form of signalling is voluntary disclosure about a firm's operations.

Spence (1974) first introduced the idea that if there is some activity whose marginal cost is lower for sellers of a high quality product, those sellers will 'signal' that they have a superior product by selecting a higher level of the

signalling activity. The assumption that the cost of signalling be smaller for those with higher quality goods is crucial.

Stock prices tend to decline on issuing new securities. Leland and Pyle (1977) attribute this to the moral hazard problem that managers know more than outsiders. Firm management, which is better informed than investors, must convince potential investors that it is not selling shares because it knows the price is too high.

Leland and Pyle (1977) consider an entrepreneur seeking additional equity financing for a single project. An entrepreneur's willingness to invest in his own project is shown to serve as a signal of project quality. The entrepreneur knows the project's rate of return but investors do not. Outsiders observe the fraction of the entrepreneur's personal wealth committed to the project and set their valuation accordingly. The percentage ownership retained serves as a credible signal of firm value because it forces entrepreneurs to forego diversification of their portfolios. Entrepreneurs normally prefer to spread their risk by selling their shares.

Signalling is shown to incur welfare costs by inducing entrepreneurs to take larger equity proportions in their own firms than they would if information was directly transferred. Entrepreneurs of higher quality firms can afford to retain a larger proportion of the firm because they can expect compensation for the increased risk.

Bhattacharya and Ritter's (1983) model is based on one set of competing firms engaged in research and development activity which involves raising external capital in the market. A firm with superior information decides on the level of disclosure, taking into account the impact on the market and on rivals' success probability in the research and development race. The only way the informed firm can communicate its prospects to capital markets is through the disclosure of technological information of direct usefulness to competitors. The informed firm

Table 2.2 Summary of research on signalling theory

Analytical models

Study	Findings
Spence (1974)	The possessor of superior information will signal what he knows to achieve some economic benefit. Signalling is instituted from the top down, and the process of reaching signalling equilibrium is one of unravelling from the top down.
Leland & Pyle (1977)	Entrepreneurs signal higher project quality by taking a higher proportion of equity in the project than risk diversification strategies would recommend.
Bhattacharya & Ritter(1983)	Develop a model based on competing firms engaged in research and development which involves raising finance in the capital market. The model shows that firms can signal their real value to investors without revealing everything competitors would like to know.
Hughes (1986)	Formulates a bivariate signalling model extending Leland and Pyle (1977) to include a second signal: direct disclosure of accounting reports.
Trueman (1986)	Hypothesises that the act of disclosure itself, and not the information disclosed, provides a positive signal to the market of management's superior ability to anticipate future changes in the firm's economic environment. Trueman's hypothesis provides an explanation of why manager's disclose forecasts that lower firm market value.
Titman & Trueman (1986)	Present analysis to show that choice of auditor (or investment banker) provides information useful to investors. The higher the quality level chosen, the greater will be investors' perceptions of firm value.

Table 2.2 Summary of research on signalling theory (continued)

Empirical research Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Downes & Heinkel (1982)	Pricing new issues	449	OLS and WLS regression	Retained ownership, earnings, debt, industry, age, sales, growth in sales, underwriter prestige.	Firms with higher retained ownership by entrepreneurs have higher values.
Simunic & Stein (1987)	Pricing new issues	469	Logit analysis	Total assets, geographic dispersion, complexity of issuer, % outsider shares, leverage, underwriter reputation, age, growth, industry.	Firms associated with big-eight auditors are able to get higher premiums over book value for firms making IPOs compared to non big-eight audited firms.
Beatty (1989)	Pricing new issues	2,215	Pearson correlation Regression	Client age, type of underwriting contract, % ownership offered, oil and gas indicator, underwriter reputation, auditor reputation.	Shows that hiring of a 'nationally known' audit firm is related to less underpricing of initial public offerings.
Balvers, McDonald & Miller (1988)	Pricing new issues	1,182	Pearson correlation Regression	Systematic risk, risk premium, IPO index, investment banker and auditor reputation.	Shows that investment banker and auditor reputation help to reduce initial public offering underpricing.
Feltham, Hughes & Simunic (1991)	Pricing new issues	469	Regression	Auditor quality, assets in place, proceeds of issue, market value.	Weakly supports association of higher risk firms with higher quality auditors. No association was found between auditor quality and market value.
Menon & Williams (1991)	Pricing new issues	1,168	Correlation Logistic regression Regression	Auditor change, investment banker, % dilution ownership, type of offering, size, growth.	There were relatively few auditor changes prior to IPO but, for those making changes, there is a clear preference for more credible auditors.

Table 2.2 Summary of research on signalling theory (continued)

Empirical research (continued) Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Keasey & McGuinness (1991)	Forecast accuracy Pricing new issues	194 121F	Wilcoxon matched pairs signed ranks test Regression	Advising agents, flotation costs, % equity retained by owners, age, industry, debt/equity ratio, size, growth in market, length of forecast period.	Prices after flotation were positively related to the information content of forecasts disclosed, but initial offer prices were not.
Firth & Smith (1992)	Forecast accuracy	89	Regression	Size, period forecast, age, existence prior to IPO, auditor, leverage.	The auditor variable was unable to explain forecast accuracy.
Clarkson, Dontoh, Richardson & Sefcik (1992)	Valuation of IPOs	121	Chi-square Wilcoxon rank sum test Regression	Market expectations, market value, size, debt equity ratio, industry, auditor and underwriter prestige, terms of offerings, % retained ownership.	Direct disclosure of a forecast and % retained ownership were found to signal issue quality. Audit quality, underwriter prestige and terms of offering were not significantly different for forecasters and nonforecasters.
Holland & Horton (1993)	Pricing new issues	230	OLS regression	Sponsor, audit firm, directors' retained equity, forecast, uncertainty, market volatility.	Higher reputation auditing firms are associated with higher levels of discount for only one of two periods of the study. No association was found between sponsors and level of discount.
How, Izan & Monroe (1995)	Pricing new issues	340	OLS regression	Uncertainty, issue size, age, accountant and underwriter prestige, listing, economy, debt, growth.	Results provide strong support (firms less underpriced) for the reputation effect of underwriter but not of accountant.
<u>To signal management's planning ability</u>					
Pownall & Waymire (1989)	Management forecast disclosure	317F	F statistic	Response coefficients on management forecasts and earnings announcements.	Management forecasts are associated, on average, with larger stock price reactions than earnings announcements. Trueman's (1986) hypothesis is not supported.

therefore faces a trade-off between reducing the value of its informational advantage and raising finance at better terms that reflect its innovation prospects, thus reducing the dilution for existing shareholders who own the research and development technology.

Hughes (1986) extends Leland and Pyle (1977) by considering a setting in which an entrepreneur discloses two signals: percentage retained ownership and direct disclosure about expected future cash flow. Higher levels of ownership retention signal a willingness on the part of risk-averse entrepreneurs to invest a disproportionate share of wealth in the firm. The entrepreneur is able to credibly disclose information about expected future cash flow because of the assumed penalty whereby the proceeds received in the offering are refunded back to investors if the direct disclosure is found not to have been made in good faith. The two signals are related through their cost structures and are chosen simultaneously to minimise the cost of signalling firm value.

Titman and Trueman (1986) argue that the quality of advising agent chosen by the entrepreneur when going public also provides information about the value of the firm to investors. An owner with more favourable information will be willing to pay the (presumably higher) fee of a high quality advisor.

Signalling superior management quality

Trueman (1986) develops a model to explain the disclosure of bad as well as good news forecasts. He hypothesises that the act of forecast release itself may also provide a positive signal to the market about the firm's value. He argues that the firm's value at the end of any period will be a function of investors' perceptions about the ability of management to anticipate future changes in the firm's economic environment and to choose the firm's optimal production level accordingly. Since investors cannot directly observe their ability, managers have an incentive to disclose updated earnings forecasts as soon as they observe the change. The sooner an earnings forecast is released the more favourably will investors be able to assess the manager's ability to recognise changes in the firm's economic environment as they arise. Thus, the manager's incentive comes from

his desire to inform investors that he has observed changes in the firm's economic environment which have caused him to change his expectation of earnings. He releases a forecast to signal to investors his ability to anticipate future changes.

This implies that the end of period market value of the firm will be higher if a forecast is released regardless of whether it discloses good news or bad. Trueman made two empirical predictions from his model. Forecast release is more likely in firms with low competitive costs of disclosure (firms in monopoly positions or with a very large share of their product markets; firms where competitors have very little excess capacity; capital intensive firms requiring a relatively long time to adjust production). Forecast release is also more likely in firms in which there is a greater ability to change input levels in response to new information (those with unused capacity; those that are labour intensive (relative ease of changing amount of labour compared to amount of machinery)).

2.2.1 Empirical studies of signalling theory

Boyle (1989), among others, argues that '... *attempting to provide an empirical base for signalling models is a very challenging task...*'. Relationships that have been obtained in theoretical signalling models '...*are subtle and complex.. difficult to test empirically since the combination of signals used will vary in relation to their relative costs*'.

Downes and Heinkel (1982) provide empirical support for Leland and Pyle's (1977) model and the role of retained ownership as a signal of value. Previous research has examined the importance of the reputational signalling of advisors (Simunic and Stein, 1987; Beatty, 1989; Balvers, McDonald and Miller, 1988; Keasey and McGuinness, 1991; Feltham, Hughes and Simunic, 1991; Firth and Smith, 1992; Holland and Horton, 1993, How, Izan and Monroe, 1995). Simunic and Stein (1987) found that firms associated with higher reputation (big-eight) auditors were able to get higher premiums over book value for initial public offering firms compared with other auditing firms. Beatty (1989) and Balvers, McDonald and Miller (1988) contend that underpricing is a function of *ex ante*

uncertainty about the value of the issue. Engaging a reputable auditor helps reduce this uncertainty.

Menon and Williams (1991) found, consistent with their auditor credibility hypothesis (that the credibility of financial statements, in part, depends on the perceived quality of the audit), that firms switching auditors prior to initial public offerings leads to small auditors being replaced by larger, better reputed ones.

Keasey and McGuinness (1991) examine, from the perspective of signalling theory, the influence of disclosure of forecasts on the pricing of new issue of shares of companies seeking a listing on the Unlisted Securities Market. The act of disclosure is hypothesised to result in more favourable pricing of shares. Results confirm that disclosure of forecasts affect the offer price at flotation. A significant relationship is found between forecast disclosure and share price once active trading after placement commenced. Thus, the greater the information revealed by the forecasts the greater the increase in traded prices above the initial offer price. Results also show that the initial pricing of new issues is not significantly related to the signalling variables, retained owners' equity or advising agent.

Feltham, Hughes and Simunic (1991) argue that financial reports attested by higher quality auditors should have greater marginal effect on current market value than the audited reports of lower quality auditors. They found no support for their hypothesis.

Firth and Smith (1992) examine forecast accuracy during initial public offerings against a number of variables, including auditor. They hypothesise that big-eight auditors are retained to add credibility to the new issue and will be associated with increased forecast accuracy. They found no support for their hypothesis.

Clarkson, Dontoh, Richardson and Sefcik (1992) examine the role played by two signalling devices: percentage retained ownership and direct disclosure in the

valuation of initial public offerings in Canada. They found that value is increasing in both the percentage of retained ownership and the direct disclosure signal.

Holland and Horton (1993) test the effect of auditor choice and of financial advisors on the level of discount on initial public offerings. They found a significant relationship between level of discount and quality of audit firm employed. Higher quality audit firms were associated with lower levels of discount. No significant relationship was found between quality of financial advisor and level of discount.

How, Izan and Monroe (1995) test the reputation of advisors to the preparation of IPO prospectuses, as a proxy for quality of information available to investors. Firms with higher reputation underwriters were less underpriced. There was evidence of a negative relation between underpricing and reputation of reporting accountant but this finding was not significant.

<u>To signal management's planning ability (Trueman's model)</u>

Pownall and Waymire (1989) test Trueman's (1986) hypothesis that the act of voluntary disclosure conveys favourable information for securities prices. If the act of disclosure conveys favourable information for prices, systematic mean shifts in returns should be positive. The evidence does not support Trueman's hypothesis. Pownall and Waymire (1989) found that it is the forecast itself and not the voluntary disclosure that has information content.

2.3 Agency theory

Watts and Zimmerman (1978) suggest that a positive theory for determining accounting standards be developed. To develop such a theory it is necessary to know why firms choose accounting policies rather than what policies they 'should' adopt. Agency theory provides the basis for the economic incentives approach to accounting policy choice. This research is summarised in table 2.3.

Agency theory explains managerial motives in firms where ownership of the firm is separated from the control function which is carried out by managers acting on

behalf of shareholders. Jensen and Meckling (1976) and Fama (1980) developed models of the firm as a 'nexus of contracts' between suppliers of various factors of production with each factor motivated by self-interest. They define an agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. If both parties to the relationship are utility maximisers, there is good reason to believe that the agent does not always act in the best interests of the principal.

As the amount of outside equity increases agency costs will increase. The agency cost of debt will similarly rise as the amount of outside financing increases. Jensen and Meckling (1976) assert that, as managers' ownership share falls, outside shareholders have increased incentives to expend resources to monitor managers' behaviour.

Fama (1980) shows how the separation of ownership and control can be explained as an efficient form of economic organisation with a *'set of contracts'* perspective. The primary disciplining of managers comes from managerial labour markets with assistance from a panoply of internal and external monitoring devices to stimulate ongoing efficiency, and with the market for outside takeovers providing discipline of last resort.

In most agency relationships, the principal and agent incur monitoring and bonding costs. A principal can limit divergences from his interest by establishing appropriate incentives for the agent, and by incurring monitoring costs designed to limit the aberrant activities of the agent. These include auditing, formal control systems, budget restrictions and establishing incentive compensation systems which serve to more closely identify managers' interests with those of outside equity holders. In addition, in some situations it will pay the agent to expend resources (bonding costs) to guarantee he will not take certain actions which would harm the principal.

Table 2.3 Summary of research on agency theory

Analytical models

Study	Findings
Jensen & Meckling (1976)} Fama (1980) }	The firm is viewed as a 'nexus of contracts' between suppliers of various factors of production with each factor motivated by self-interest. In a corporate world characterised by the separation of ownership and control, firm disclosures can act as a monitoring mechanism for the agency relationship between managers and shareholders.

Empirical studies

Study	Event	Sample Size	Methodology	Variables of interest	Summary of study results
Salamon & Dhaliwal (1980)	Segmental disclosure	51	Mann-Whitney U test Contingency tables	Size, new capital issues.	Both size and new capital issues were found to be significantly related to voluntary segmental disclosure.
Leftwich, Watts & Zimmerman (1981)	Interim reports	165	Correlation Probit analysis	Size, outside directors, assets in place, leverage, exchange listing.	Results were weak and inconclusive.
Bazley, Brown & Izan (1985)	Lease disclosures	370	Mann-Whitney U test Pearson correlation	Industry, size, auditors, firm risk, lessee subsidiary of foreign parent, lessee entered good reporting award, bonus scheme related to profits.	Frequency of voluntary disclosure was related to firm size, industry and lessee subsidiary of a foreign parent. The model had modest explanatory power.
Whittred (1987)	Consolidation	70	Mann-Whitney U test Wilcoxon test Probit analysis	Leverage, wholly-owned subsidiary, ownership control, number of subsidiaries, cross-guarantees.	Consistent with agency theory, likelihood of consolidation was found to be a function of existence of cross-guarantees, management share of equity and the number and type of subsidiaries.

Table 2.3 Summary of research on agency theory (continued)

Empirical studies (continued)

Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Wong (1988)	Current cost accounts	201	*t*-test Logit analysis	Effective tax rate, leverage, market concentration, return on assets, capital intensity, net income.	Leverage, return on assets, market concentration, capital intensity and firm size were found to be significant. The model supported the political cost hypothesis.
Ruland, Tung & George (1990)	Forecast disclosure	292	Wilcoxon test *t*- test Pearson correlation Probit analysis	Good news, analyst forecast errors, new capital offerings, ownership structure.	Consistent with agency theory, ownership structure is the most important factor distinguishing disclosing and nondisclosing firms.
Deegan & Hallam (1991)	Value added statements	215	Spearman rank correlation OLS regression	Labour intensity, industry volatility, taxation, rate of return, size, concentration.	Size, concentration and taxation were significant at 5%, rate of return at 10% and labour intensity at 8% but in the opposite direction to predicted.
Craswell & Taylor (1992)	Oil and gas reserves	86	*t*-test Mann-Whitney U test Probit analysis	Leverage, cash flow risk, separation ownership and control, size, auditor.	Only weak support of contracting costs hypothesis. Agency costs proxies failed to explain the dichotomous accounting choice.
Bradbury (1992a)	Voluntary disclosure of interim reports	172	Chi-square test Mann-Whitney U test	Earnings volatility, unexpected earnings, size.	No relationship was found between voluntary disclosure of interim results and earnings volatility or firm size. Bad news was not found to be associated with lower disclosure.

Table 2.3 Summary of research on agency theory (continued)

Empirical studies (continued)

Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Bradbury (1992b)	Segment data	29	Chi-square test Mann-Whitney U test Spearman correlation Logistic regression	Size, leverage, assets in place, earnings volatility, source finance.	There was a positive association with firm size and leverage but not with assets in place, earnings volatility and foreign funding.
Kelly (1994)	Segmental disclosure	132	Spearman rank correlation Probit analysis	Return on investment, leverage, industry, size, auditor	A positive correlation between return on investment and voluntary segment disclosures was found.

Expenditure on monitoring can reduce agency costs. The higher the level of agency costs the greater the incentive for managers to employ monitoring. Managers incur expenditure on one or more monitoring devices such as publication of accounting reports, appointment of outside directors and listing requirements of stock exchanges (more stringent stock exchanges attract listing from firms that value monitoring). Firm disclosures can serve as a monitoring mechanism for the agency relationship between managers and shareholders. It is in the interest of managers to produce accounting information voluntarily, which they can do at a lower cost than if shareholders were to produce the same information. Thus, agency theory posits that voluntary disclosure is made to reduce agency costs.

Watts and Zimmerman (1978) first introduced the notion of positive accounting theory to explain accounting practices in terms of managements' voluntary choices of accounting procedures. Following agency theory and considerations of the conflict between management and shareholders, they argue that managers will make accounting choices which increase management wealth. This happens through increase in share price (which increases the value of managements' shares and stock options) and via incentive cash bonuses. Choice of accounting method is hypothesised to increase both of these forms of compensation, directly via management compensation plans, and indirectly through taxes, regulatory procedures (if the firm is regulated), political costs and information production costs.

Watts and Zimmerman (1978) predict that size (as a proxy for political costs), existence of management compensation plans, tax effects, and whether or not the firm was regulated would be related to the lobbying position of firms making submissions about inflation accounting. Only size is significant.

Watts and Zimmerman (1986) develop their views on the contracting role of accounting in monitoring the contract between shareholders and managers and between shareholders, debtholders and managers. They review the research on the relationship between accounting and compensation plans, debt contracts and the

political process. An update on the economics of accounting policy choice from a costly contracting perspective is provided in Ball and Smith (1992).

This research is concerned with the accounting choice to make voluntary disclosure. The costly contracting/agency literature referred to in the rest of this chapter relates to voluntary accounting disclosure choices.

2.3.1 Empirical studies of agency theory

Empirical studies of agency theory have all employed a 'derived demand' approach in which costs of information disclosure are assumed to be cross-sectionally constant, and the disclosure decision is modelled as a response to demand arising from increasing agency costs.

Many studies have hypothesised that firms' voluntary accounting and disclosure choices are aimed at controlling interest conflicts amongst shareholders, debt holders and management (Holthausen and Leftwich, 1983; Kelly, 1983; Watts and Zimmerman, 1986). Agency theory suggests several variables for explaining cross-sectional variation in voluntary accounting and disclosure choices. Managers choose a monitoring package that depends on the costs and benefits of the various monitoring devices. Benefits of monitoring depend on items such as the asset structure of the firm (e.g. assets in place versus growth opportunities) and composition of financial claims (e.g. inside versus outside capital). Firm size, financial leverage and proportion of assets in place have been hypothesised to affect voluntary financial disclosure by influencing the magnitude of agency costs.

Salamon and Dhaliwal (1980) examine voluntary segmental disclosure by a group of low disclosure firms against a high disclosure group. Following Jensen and Meckling's agency theory, they hypothesise that increased disclosure results in a reduction of a firm's cost of capital and that voluntary segmental disclosure will be related to size and to the extent of public capital issued by the firm. If small firms rely less extensively on public capital, then they will have less disclosure than large firms. Both size and new capital issues were found to be significantly related to voluntary segmental disclosure.

Leftwich, Watts and Zimmerman (1981) investigate managers' incentives to provide interim reports voluntarily and, in particular, why managers choose a particular reporting frequency for external purposes. The paper explores whether the monitoring process associated with issuing capital to parties outside the firm can explain why managers exceed minimum reporting requirements, and whether the variation is related to variables suggested by agency theory. Results were weak.

Bazley, Brown and Izan (1985) investigate the voluntary lease disclosure practices of 649 Australian listed companies. Relative frequency of voluntary disclosure was found to be related to industry type, firm size, whether the lessee was a subsidiary of a foreign parent company and was weakly related to whether the lessee entered the Australian Institute of Management good reporting award. Frequency of voluntary reporting was unrelated to identity of auditors, existence of profit-related bonus schemes and the relative risk of the firm. The multivariate tests supported univariate results but overall explanatory power was weak. Inclusion of additional variables such as existence of bonus schemes and relative risk (as a surrogate for earnings variability) were found to be insignificant. The model thus had low explanatory power and the test for predictive ability was only marginally significant.

Verrecchia (1983) argues that, if proprietary costs are relatively homogeneous within specific industry groups, then focusing on a specific industry group represents a more powerful test of the agency-cost framework. The insights developed by Verrecchia are important in developing a robust empirical test of agency-based models of information disclosure policy. For example, Bazley, Brown and Izan (1985) included industry as an explanatory variable but when they found that it was significant they are unable to explain why. If proprietary costs are industry specific, the industry effect found is consistent with managers facing a trade-off between firm specific agency costs, which act as an incentive to disclose information, and industry specific proprietary costs, which tend to discourage disclosure of information.

Whittred (1987) investigates the economic incentives for Australian corporations to voluntarily adopt consolidated forms of financial reporting, following Watts' (1977) argument that consolidated accounting is adopted to reduce agency costs. Whittred predicts that the presence of cross-guarantees, the smaller the managements' share of the equity and the greater the number of subsidiaries, the greater the likelihood of consolidation. The likelihood of consolidation was found to be a function of the presence of cross-guarantees, managements' share of firms' equity and the number and type of subsidiaries. The evidence therefore supports the agency cost theory.

In an attempt to relate political incentives facing managers to their choice of accounting procedures, Wong (1988) examines whether New Zealand listed companies' voluntary disclosure of current cost financial statements is a product of the political process. He predicts that larger companies with higher tax rates, lower leverage ratios, larger market concentration ratios, higher historical return on assets and higher capital intensity are more likely to voluntarily disclose current cost financial statements. Leverage is included by Wong, not as a proxy for debt contracting costs, but because only firms with low leverage ratios are hypothesised to use current cost accounting to influence tax reform. Higher tax rates, lower leverage ratios, larger market concentration and greater capital intensity were found to be significant.

Deegan and Hallam (1991) hypothesise that value added statements have been developed and are used as a technique to assist in the reduction of political costs. They test variables proxying for political costs. The results indicate that, compared with a randomly selected group, firms preparing value added statements are larger (in terms of size and concentration), more capital intensive, more heavily taxed, and are more likely to come from manufacturing and agriculture.

Bradbury (1992a) found no association between voluntary disclosure of interim earnings and either earnings volatility or firm size. Firms with larger annual forecast errors disclosed more nonquantified interim earnings results.

Bradbury (1992b) examines voluntary segmental disclosures of 29 large New Zealand companies. Five firm-specific variables are tested. Only size and leverage were found to be significant. Earnings volatility was significant in the opposite direction to that hypothesised. Thus, firms with higher earnings volatility were found to disclose more. In multivariate tests, only size and leverage were significant.

Craswell and Taylor (1992) apply Verrecchia's (1983) model to develop a robust empirical test of agency-based models of information disclosure. They attempt to control the potentially confounding effect of proprietary costs by restricting the test of the agency model to an industry specific disclosure decision - the disclosure of reserves by Australian oil and gas companies. In univariate tests, only two of the five variables tested were significantly greater for disclosers - firm size and auditor quality. Contrary to the hypothesis, cash flow risk was significantly higher for nondisclosers. Under multivariate analysis only auditor quality is significant. Thus, univariate and multivariate analysis provide only weak support for the hypothesis that the disclosure decision is motivated by costs of contracting.

The impact of agency costs and proprietary costs on voluntary segment disclosure is examined in Kelly (1994). Leverage proxies for agency costs and return on investment for proprietary costs. The probability of segmental disclosure was lower for firms with high return on investment, supporting the argument that firms may withhold information to reduce proprietary costs. Leverage was insignificant in the probit analysis, suggesting that agency costs associated with debt contribute little to explaining voluntary segment disclosures.

Agency theory and forecast disclosure

Little published research has addressed management forecasts from the agency perspective. This is because evidence suggests that managers are compensated on reported, and not forecast, earnings. If forecasts helped to mitigate agency problems they would be released on a more regular basis. As forecasts tend to be released late in the year it seems unlikely they alleviate agency problems.

Only Ruland, Tung and George (1990) have tested agency theory in the context of the voluntary disclosure of earnings forecasts. The only agency theory variable tested was ownership structure, being the percentage of voting stock owned by the officers and directors. They test the hypothesis that forecast reporting firms have a higher proportion of outside ownership than other firms. Inside ownership was found to be lower for the reporting firms with differences significant at one per cent. Ownership structure was the most important variable in the multivariate analysis distinguishing reporting and comparison firms. Inside ownership, consistent with predictions of agency theory, was significantly lower for reporting firms.

In a study of forecast accuracy, Firth and Smith (1992) test the effect of debt on accuracy. They suggest that the net profits of companies with comparatively high levels of debt are traditionally regarded as being more difficult to forecast. They use a debt/gross assets measure. The only significant variable they found was size and this was in the opposite direction to that predicted.

2.4 The market for corporate control

Jensen and Ruback (1983), among others, refer to the takeover market as the market for corporate control in which alternative management teams compete for the rights to manage corporate resources. Under this view, it is the managers who are the primary activists, with shareholders playing a relatively passive role.

The management team of the successful bidder benefit on average from a successful takeover as they finish up managing a larger business, which gives them increased status and higher remuneration. The management team of the target on average lose in a successful takeover. They therefore have a vested interest in fighting a takeover bid, even if the resistance is not in the interests of their shareholders. Consistent with agency theory, if managers only own a small proportion of the equity, they may have different objectives from those of the shareholders.

Jensen (1986) argues that one major cause of takeover activity is the agency costs associated with conflicts between managers and shareholders over the payout of free cash flow. Payment of cash to shareholders reduces the resources controlled by management, thereby reducing their power and subjecting them to monitoring by capital markets when they need to obtain new capital. There is a problem in motivating managers to pay out cash rather than invest it at below the cost of capital, or waste it through organisational inefficiencies.

The control hypothesis put forward by Jensen (1986) suggests that increasing debt in a company reduces the agency costs of free cash flow available for spending at the discretion of managers. Management of a firm with high gearing can be 'bonded' to operate efficiently in order to meet debt repayment schedules.

Acquisitions are another way managers spend cash and reduce free cash flow. The free cash flow theory predicts that bidders will tend to have exceptionally good performance prior to the takeover (which generates the free cash). Targets are predicted to be either firms with poor management or firms that have performed exceptionally well with large free cash flow which has not been paid out to shareholders. Consistent with the theory, takeovers financed with cash and debt create larger benefits than those accomplished through share exchange (Wansley, Lane and Yang, 1987).

2.4.1 Corporate control and accounting policy choice

Three papers have dealt with the issue of accounting policy choice and the market for corporate control. DeAngelo (1988) shows that incumbent management manipulate earnings in attempts to avert a control transfer via corporate control disciplinary mechanisms. Groff and Wright (1989) and Christie and Zimmerman (1994) show that managerial behaviour in takeover targets is more opportunistic in choosing income-increasing accounting policies.

DeAngelo (1988) examines accounting performance measures in 86 proxy contests. She finds that sample firms' pre-contest accounting returns were

systematically below market, whereas pre-contest stock returns were not. In 66 of the 86 sample contests, management released earnings information during the contest. For the 43 earnings releases for which there was data, there is evidence from accruals of manipulation by management to increase earnings. Results, based on a proxy for cash flow, suggest that related real profitability did not increase. DeAngelo (1988) concludes that the findings indicate that corporate earnings performance plays a role in the process through which alternative managers compete for shareholder support.

Three alternative views on accounting policy choice are discussed in Holthausen (1990). The efficient contracting perspective is based on the assumption that accounting policy choices are made to minimise agency costs and thus maximise shareholder wealth. Another view is that managers are driven by opportunistic behaviour and choose accounting policies to maximise their own utility. Thirdly, Holthausen and Leftwich (1983) put forward the information perspective rationale of accounting method choice. If managers have a comparative advantage in providing information about firms, they would expect to be compensated in part on the basis of their ability to provide information about future cash flows of the firm. Holthausen (1990) points to the difficulties in empirically devising tests that distinguish efficiency and opportunistic choices.

Groff and Wright (1989) and Christie and Zimmerman (1994) assume that managements in takeover targets are less value-maximising and efficient, and are more opportunistic, than nontakeover targets. They argue that entrenched managers acting in their own self-interest are ultimately disciplined by a threat of takeover.

Using an industry-size-leverage matching approach and multivariate probit analysis, Groff and Wright (1989) found that 79 target firms more frequently chose income increasing accounting policies than did nontakeover target firms.

Christie and Zimmerman (1994) use a sample of takeover targets to represent opportunistic managers. Three income-increasing accounting choices are

examined for target and non-target firms. They find that targets select income-increasing accounting methods more frequently, but that the upper bound on the frequency is small relative to nontargets. Christie and Zimmerman (1994) conclude that some accounting opportunism exists but that efficiency is a more important explanation of accounting choice.

These three papers show the importance of financial accounting information in the governance of public companies.

2.4.2 Characteristics of takeover bids and takeover firms

Economic analysis has identified two very different motivations and types of takeover: disciplinary takeovers and synergistic takeovers (Mørck, Shleifer and Vishney, 1988). These two motivations for takeover are often associated with either friendly or hostile takeover bids. Participants in takeover bids (bidders and targets) are also likely to have different motivations and possibly different characteristics. In addition to the nature of the bid (friendly or hostile) and the party to the bid (bidder or target), a third factor, the method of payment (cash versus shares), may distinguish takeovers.

There is a substantial literature showing that characteristics of takeover targets are different from the general population of firms and from bidding firms (Tzoannos and Samuels, 1972; Levine and Aaronovitch, 1981; Hasbrouck, 1985; Palepu, 1986; Barnes, 1990; Powell, 1995). Further analysis has shown that the characteristics of targets differ depending on whether the takeover bid is friendly or hostile (Mørck, Shleifer and Vishney, 1988). Some researchers have examined factors relating to successful and failed or abandoned mergers (Pickering, 1978 and 1983; Taffler and Holl, 1991; Limmack, 1994) and have found significant differences influencing the outcome of the bid.

Three theories are put forward to explain choice of method of payment in takeovers: taxation, information asymmetires and agency theory. The choice affects the capital gains tax liabilities of the acquired firm's shareholders. Myers and Majluf (1984) suggest that managers with inside information about firms'

assets and investment opportunities will restrict sales of shares to periods when these are not undervalued by the market. Shareholders will prefer cash than shares that are possibly overvalued by the market. Thus, asymmetries in information about the value of the bidder discourage the use of equity finance. Fishman (1989) argues that cash bids are likely to be associated with high offers and high bid premia which deters other companies from initiating competing offers.

Carleton, Guilkey, Harris and Stewart (1983) are able to distinguish financial characteristics of acquired and nonacquired targets based on method of payment. Eckbo and Langohr (1989) find that takeover premiums are significantly higher in all-cash than in all-share exchange offers but that method of payment has no effect on abnormal stock returns of bidders. Franks, Harris and Mayer (1988) examine the influence of method of payment in US and UK takeovers. Bid premia to UK target shareholders in cash acquisitions were significantly in excess of those in equity acquisitions. In the US there were significant positive gains to bidders in cash acquisitions and significant losses in equity acquisitions.

To summarise, the characteristics of takeover bids and takeover firms have been found to depend on whether the bid was contested or not, on whether the firm is bidder or target and on the method of payment for the acquisition. None of these variables have been empirically tested against disclosure of information during takeover bids.

2.5 Empirical research of voluntary disclosure

Studies on voluntary disclosure come mainly from the US. Most studies are concerned with market reaction to disclosure, although more recent research has considered disclosure from a strategic perspective. Table 2.4 summarises these empirical studies.

Hoskin, Hughes and Ricks (1986) examine the incremental information content of additional firm disclosures released concurrently with announcements of annual earnings. They found that additional disclosures have information content beyond that contained in earnings. Both qualitative and quantitative disclosures have

information content, which is strongly influenced by the prospective nature of the message and the degree of its verifiability - point forecasts have greater information content than qualitative forecasts.

Thompson, Olsen and Dietrich (1987) analyse firm-specific news reported in the *Wall Street Journal*. They found considerable variation in the type of news disclosures. These disclosures had information content for security prices.

Gibbins, Richardson and Waterhouse (1990 and 1992) develop a framework to analyse firms' disclosure processes, firms' organisational structures affecting disclosure, observed disclosure behaviours and the attributes of disclosure that are managed by the firm. Disclosure is looked at from the perspective of management of the disclosure process. They conclude that the concept of a corporate disclosure position or strategy (i.e. the firm's preference for the way disclosure is managed) offers considerable potential for explaining voluntary financial disclosure. Lev (1992) also looks at disclosure from a strategic perspective. Similarly, Healy and Palepu (1993) argue that managers can improve their communications by developing disclosure strategies.

Kasznik and Lev (1995) examine managements' discretionary disclosures prior to large earnings surprises. They found that less than ten percent of large-surprise firms disclosed quantitative earnings or sales forecasts, while roughly half the firms did not provide any information prior to surprising investors. Bad news firms released significantly more information than good news firms. The larger the surprise the more quantitative and earnings-related the disclosure. Firm size and previous issue of a forecast were associated with issuing a warning.

2.5.1 Empirical research of forecast disclosure

Characteristics of forecasters and nonforecasters

A major research issue is whether voluntarily disclosed forecasts are representative of all forecasts. Otherwise research findings using only voluntary disclosed forecasts may not be a sound basis for drawing conclusions about all forecasts.

Table 2.4 Summary of empirical research on voluntary disclosure

Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Hoskin, Hughes & Ricks (1986)	Additional disclosures with earnings	676	Regression	Excess returns, analyst forecast errors, changes in earnings.	Additional disclosures released with earnings announcements have information content.
Thompson, Olsen & Dietrich (1987)	News items in *Wall Street Journal*	42,053	*t*- statistics F statistics	News items, stock returns.	There is considerable variation in news items across time, firm size and industry grouping. Stock returns differ systematically on news days compared to no news days.
Gibbins, Richardson & Waterhouse (1990)	Corporate financial disclosures	20	Structured analysis of interview data	Disclosure outputs, disclosure position, disclosure antecedents, advisors, structure.	Theoretical structures are developed to explain disclosure involving firm's disclosure position, observed disclosure behaviour and outputs and use of external consultants.
Kasznik & Lev (1995)	Disclosures with earnings surprises	565	Logit analysis Regression	Disclosures, earnings surprises, growth, size, risk, stock returns.	Less than 10% of large-surprise firms published quantitative forecasts, while 50% of firms kept silent. Firm size and existence of a previous forecast were associated with disclosure.
Characteristics of forecasters and nonforecasters					
Imhoff (1978)	Forecast/nonforecast firms; Forecast accuracy	92F 100NF	Chi-square tests Kolmogorov-Smirnov Kendall rank correl. Spearman correlation Regression	Analyst forecast errors, earnings variability, systematic risk.	Forecast firm earnings were less variable and systematic risk was greater. Analyst forecast errors were greater for nonforecast firms. Thus, published forecasts are not representative of all firms.

Table 2.4 Summary of empirical research on voluntary disclosure (continued)

Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Characteristics of forecasters and nonforecasters (continued)					
Ruland (1979)	Forecast/nonforecast firms	60F 1317NF	Friedman two-way analysis of variance by ranks test Wilcoxon test	Earnings series, size, industry.	Earnings variability is lower for forecasting firms. However, earnings series do not differ substantially after controlling for size and industry.
Cox (1985)	Forecast/nonforecast firms	202F 202NF	Wilcoxon signed ranks test	Earnings variability, size, risk.	Earnings variability is greater for non-disclosing firms. Firm size is larger for disclosing firms. There is no significant difference in market risk between the groups.
Waymire (1985)	Repeat/non-repeat forecasters	466F	Rank-order correlation Chi-square Wilcoxon test	Earnings volatility, forecast accuracy, disclosure timing, firm size.	Frequent forecasters have less volatile earnings than infrequent forecasters. Forecast accuracy and size are similar between the two groups. There is a weak link between earnings volatility and disclosure timing.
Lev & Penman (1990)	Forecasters/non-forecasters	1,575F 1,575NF	*t*- test Chi-square test	Firm size, earnings volatility, industry, risk.	Forecasting and nonforecasting firms differ most markedly on size and earnings volatility.
Clarkson, Dontoh, Richardson & Sefcik (1992)	Valuation of IPOs	121	Chi-square Wilcoxon rank sum test Regression	Market expectations, market value, size, debt equity ratio, industry, auditor and underwriter prestige, terms of offerings, retained ownership.	Year of issue, age, size, financial structure and industry discriminated poorly between forecasters and nonforecasters.

Table 2.4 Summary of empirical research on voluntary disclosure (continued)

Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Motivations					
<u>To raise finance</u>					
Ruland, Tung & George (1990)	Forecast disclosure	146F 146NF	Wilcoxon test *t*- test Pearson correlations Probit analysis	Good news, analyst forecast errors, new capital offerings, ownership structure.	New capital offerings is the second most important variable (after ownership structure) suggesting that capital offerings motivate forecast disclosure.
Frankel, McNichols & Wilson (1995)	Firms raising finance in capital markets	1,880	Wilcoxon tests Probit analysis	Probability of a forecast, firm size, external financing.	A positive association between firms' tendencies to access capital markets and to disclose forecasts was found.
<u>Threat of competitor entry</u>					
Clarkson, Kao & Richardson (1994)	Forecasters/non-forecasters	325F 580NF	Chi-square *t*-statistic Wilcoxon rank sum test Logistic regression	Size, industry, news in forecast, equity financing, debt and equity financing, capital intensity, concentration ratio, variability of earnings.	Results are consistent with the predictions that disclosure policy is a function of financial market valuation and product market competition.
<u>Legal cost hypothesis</u>					
Skinner (1994)	Earnings-related voluntary disclosures	374	Chi-square *t*-statistic Logistic regression	Disclosures, news content, stock reaction, forecast revisions.	Managers voluntarily disclose good news. Consistent with legal and/or reputational-effects arguments, managers also make pre-emptive bad news disclosures.

Table 2.4 Summary of empirical research on voluntary disclosure (continued)

Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Motivations					
Legal cost hypothesis (continued)					
Francis, Philbrick & Schipper (1994)	Disclosure and securities litigation	98	*t*- statistic Wilcoxon test Regression	Adverse earnings news, pre-earnings disclosures, security returns, analyst forecast errors.	Voluntary, early disclosures may not be an effective deterrent to litigation.
Skinner (1995)	Disclosure and securities litigation	221	Chi-square test *t* statistic z statistic Pearson correlation Spearman correlation OLS regression	Outcome of lawsuits, type of earnings disclosure, disclosure timing, size of stock return, two size measures.	Longer delays in disclosure of bad news lead to larger lawsuit settlements. Lawsuit settlements are smaller for early disclosures.

Imhoff (1978) was the first to document firm characteristics that were systematically different between forecasting and nonforecasting firms. He studied three firm characteristics and found that forecasting firms have significantly less variable, more stable and smoother earnings. Imhoff also found firms' systematic risk to be significantly greater than average, suggesting greater volatility in market based returns of forecast firms compared to the market as a whole. Analysts' forecasts were significantly less accurate for nonforecast firms.

Ruland (1979) also found forecasting firms to have lower earnings variability and to be larger than nonforecasting firms. However, when size and industry were controlled for between forecasting and nonforecasting firms, the earnings series did not differ significantly between the two groups.

Based on a small sample of 80 forecasting and 80 nonforecasting firms, Jaggi and Grier (1980) found disclosing firms to have lower variability in historical earnings than nondisclosing firms. They found no statistically significant differences in expected future performance between the two groups. Following criticisms, Cox (1985) re-tests Imhoff's (1978) earnings variability and market risk variables and, in addition, firm size which is hypothesised to indirectly influence the information content of management forecasts. Cox found, consistent with Imhoff, that forecasting firms had significantly lower variability of earnings. However, contrary to Imhoff, he found no significant differences in the risk characteristics of forecasting and nonforecasting firms. Finally, forecasting firms were systematically larger than nonforecasting firms.

Waymire (1985) investigates the association between firms' earnings volatility and the timing and frequency of management earnings forecasts. He argues that such a relationship might be expected if earnings volatility is associated with either the costs or benefits of publicly disclosing such information. Managers of firms with more volatile earnings may be reluctant to disclose their forecasts due to increased exposure to costs (legal sanctions) associated with unattained projections. On the other hand, managers may perceive benefits of issuing forecasts which improve projections of individuals (say, analysts). One would

also expect an association between earnings volatility and forecast disclosure frequency as earnings volatility will affect managements' ability to generate accurate forecasts.

Waymire (1985) found, consistent with Imhoff (1978) and Ruland (1979), that firms that forecast more frequently (repeat forecasters) were characterised by less volatile earnings.

Lev and Penman (1990) also document that large firms have more management forecasts in the financial press and they find an association between earnings volatility and frequency of disclosure of forecasts.

Clarkson, Dontoh, Richardson and Sefcik (1992) examine a small number of initial public offering prospectuses for firms listed on the Toronto Stock Exchange between 1984 and 1987. Of these, 58% voluntarily disclose an earnings forecast. Year of issue, age, size, financial structure, industry classification and retained ownership are not significantly different between forecasters and nonforecasters. Audit quality, underwriter prestige and terms of offering are significantly different between forecasters and nonforecasters.

Clarkson, Kao and Richardson (1994) found that forecasters tended to be larger than nonforecasters. There were large differences in the proportion of forecasters across industry sectors. For the good news subsample, firm size, earnings volatility and earnings shock variables were all in the predicted direction and were significant at 5%. For the bad news subsample, these control variables were also in the predicted direction but only earnings volatility was significant at the 10% level.

2.5.1.1 Motivations for forecast disclosure

<u>To raise finance</u>

It is suggested that management earnings forecasts are used to reduce the costs of asymmetric information between managers and shareholders. Consistent with this hypothesis, Ruland, Tung and George (1990) and Frankel, McNichols and Wilson

(1995) find that the incidence of management earnings forecasts increases prior to securities offerings, a situation where the costs of asymmetric information are predicted to be particularly severe.

Ruland, Tung and George (1990) test the hypothesis that forecast reporting firms show a greater tendency than other firms to issue new capital. New capital offerings of the forecast reporting group and a control group were compared. Reporting firms were found to have significantly more capital offerings than comparison firms. Multivariate analysis showed that new capital offerings was a significant factor in distinguishing forecasting and nonforecasting firms.

Frankel, McNichols and Wilson (1995) also find a positive association between firms' tendencies to access capital markets and disclosure of management earnings forecasts. Firms financing externally are not significantly more likely to forecast in the period shortly before an offering than at other times.

Clarkson, Kao and Richardson (1994) confirm the unconditional financing hypothesis of Frankel, McNichols and Wilson (1995) that disclosure of forecasts is directly related to the need for external financing. However, in their study, tests of the financing hypothesis are conditioned on the nature of the news (good or bad) possessed by the manager. For good news firms the probability of forecasting is increasing in the firm's financing requirements (and *vice versa* for bad news firms).

<u>Threat of competitor entry</u>

The predictions of Darrough and Stoughton (1990) of the trade-off of value maximisation and the need to protect proprietary information from rival firms are tested in Clarkson, Kao and Richardson (1994). They hypothesise that probability of forecasting should decrease with threat of competitor entry. When firms are partitioned according to the nature of news in the forecasts, results are consistent with the product market effects hypothesis.

Legal cost hypothesis

Skinner (1994) investigates incentives for firms disclosing adverse information. He argues that shareholders tend only to sue if there is a large negative return at an earnings announcement. This creates an incentive for mangers to disclose bad news voluntarily, in order to reduce costs of litigation. Skinner provides evidence suggesting that firms pre-empt bad quarterly earnings news with voluntary disclosures of bad news. However, Francis, Philbrick and Schipper (1994) report that forecasts and other pre-emptive disclosures are most often cited by plaintiffs as the events which initiated litigation. They conclude that the release of early warning of bad news is no deterrent to litigation and can themselves trigger suits. Skinner (1995), using a much larger sample than Francis, Philbrick and Schipper (1994), finds that more timely disclosure can result in less costly lawsuits.

2.5.2 Disclosure and market expectations

The expectations adjustment hypothesis of Ajinkya and Gift (1984) is that managers disclose forecasts to induce a revision in investors' expectations of future earnings. Managers have incentives to disclose both favourable and adverse forecasts. Disclosure of forecasts reduces information asymmetry among investors and thus reduces transactions costs. Prior research suggests that these costs are greater when opportunities to trade on private information are greater. Management disclosures that hasten information arrival to investors serve to pre-empt private information acquisition. If investors expect firms to supply credible, timely and precise disclosures, the firm will be able to sell new equity shares at higher initial prices.

Ajinkya and Gift empirically test their hypothesis by comparing the management forecast with analysts' forecasts prevailing just prior to the release of the management forecast (as surrogates for market expectations). The results support the hypothesis that forecasts occur in cases in which good news and bad news adjustments are called for, and the market responds symmetrically to the direction and magnitude of these forecast signals. For the test of 'correcting' prevailing market expectations, the management forecast signal provided a significant explanation of the capital market reaction in the month of the forecast. The capital

market reaction was consistent with the proposition that management forecasts were viewed by outsiders as credible efforts to guide prevailing expectations in directions that would be more reasonably achieved.

Ruland, Tung and George (1990) also tested the expectations adjustment hypothesis of Ajinkya and Gift (1984). Their results suggest that managers' forecasts tend to confirm rather than correct analysts' forecasts.

Skinner (1994) finds in his classification of disclosure announcements that approximately 5% of observations fall into the no news category. This, he comments, is consistent with the view that managers disclose information to change earnings expectations. Whereas Ajinkya and Gift (1984) only considered point and narrowly defined range forecasts, Skinner's findings are based on varied types of forecast, including qualitative forecasts.

2.5.3 Profit forecasts as defences in takeovers

There is considerable anecdotal evidence that publication of profit forecasts affect the outcome of contested bids. It is assumed in the takeover literature that publication of a forecast is a strategy that can influence the success or failure of contested bids or can lead to increased offers. There has been little systematic empirical research into the effectiveness of profit forecasts as defence weapons.

Profits announcements represent a very important plank of defence. Forecasts above market expectations will immediately render the offer price unattractive and force the predator on the defensive. In many cases, profit forecasts have swung the battle the target's way. Forecast reductions in profit can be a successful defence. During Godfrey Davis's hostile bid for Sketchley in 1990, Sketchley announced a forecast profit reduction of £6 million, which caused Godfrey Davis to withdraw its bid. *Acquisitions Monthly* in its March 1989 edition (p.78) refers to Thompson T-Line's failure to rebuff Ladbroke Group's hostile bid as follows: '*Ladbroke increased its offer to 90p and won TTL's recommendation after TTL failed to make a profit forecast*'.

Corporate control and takeover defences

Two competing hypotheses have been offered concerning the wealth effects of takeover defences. The managerial entrenchment hypothesis holds that takeover defences raise the cost of displacing inefficient management and reduce shareholder wealth. Under the shareholder interests hypothesis, takeover defences enable shareholders to secure higher bid prices.

Providing target management with the power to defend against hostile takeover bids might help target shareholders during a control contest. Target management can, in some cases, defeat a bid that is 'inadequate' or, more importantly, promote a takeover auction leading to a higher bid price. On the other hand, shareholders may be deprived of a substantial premium if resistance leads to defeat of the offer. An additional cost in bid defences is that potential bid resistance and defensive tactics may prevent offers being made. The potential for owner-manager conflict is especially high in the case of contested bids. Managers who believe the bid is in the best interests of the shareholders may nonetheless resist the bid to protect their employment positions and to avoid seeking employment elsewhere. Target managers may increase inequities by using firm resources in defence of their own position. Shleifer and Visney (1989) present a model of managerial entrenchment. Managers use a variety of entrenchment schemes, including the use of disclosure policies, that make it harder for non-managers to estimate the gains from replacing incumbent managers.

Disclosure of good news may satisfy personal objectives of managers such as job retention. Trachtenberg (1989) writes that Avon Products forecast good news following a hostile takeover bid, and at least one analyst interpreted this good news forecast as a takeover defence consistent with job retention.

There are generally two approaches to examining the effects of defensive measures by targets: event-type studies and outcomes-type studies. Event-type studies investigate the impact on market value of, say, adopting a particular defence tactic. Outcomes-type studies examine the actual outcomes of contested bids using a common kind of resistance.

Empirical research in the US

A number of studies in the US have examined the impact of takeover defence strategies on target shareholder wealth, including Linn and McConnell (1983), Dann and DeAngelo (1983), DeAngelo and Rice (1983), Jarrell and Poulsen (1987), Malatesta and Walking (1988), Ryngaert (1988), Netter and Poulsen (1989), Lauterbach, Malitz and Vu (1991), MacMinn and Cook (1991) and Bojanic and Officer (1994). The evidence has been mixed.

Walking and Long (1984) analyse the relationship between bid resistance and managerial wealth and find empirical support for the managerial entrenchment hypothesis. Takeover bid resistance was significantly related to the potential share and option value changes to officers and directors arising from the bid.. The potential wealth change to officers and directors of targets was significantly and substantially lower in contested bids.

Empirical research in the UK

Target companies defending against hostile bids have a wide variety of potential defence strategies to choose from. Jenkinson and Mayer (1991) classified nine defence tactics and Sudarsanam (1991) 24 (9 pre-bid and 15 post-bid).

Jenkinson and Mayer (1991) studied takeover defence strategies in 42 hostile takeover bids in the UK. Defence tactics were divided into five categories: financial responses, corporate restructurings, white knights, poison pills and legal/political defences. Profit forecasts were the most prominent financial response, followed by dividend forecasts and asset revaluations (particularly common amongst property companies, breweries and retail chains).

Using case study methodology, Jenkinson and Mayer found that there was very little relation between the success of defence and the type of defence employed. However, they found a clear pattern when they distinguished between different classes of bid. In the case of paper or mixed consideration offers, the nature of the

defence put up by the target is of crucial importance. Most firms in these non-cash bids succeeded in repelling the bidder.

Sudarsanam (1994) reports the results of a survey of takeover defence strategies in 238 contested bids for UK public companies. Profit forecasts were the most commonly used defence (45% of targets made a profit forecast) after 'knocking copy' (i.e. attack of bid terms). Sudarsanam found that only four of the 23 defence strategies identified in the research contributed to a successful defence. Surprisingly, profit forecasts made a slightly negative impact on bid defence. He suggests that profit forecasts do not cover a long period ahead and, thus, do not provide substantial new information to target shareholders. In addition, they are not highly regarded by investment managers, and the scepticism with which they are received may have blunted their effectiveness as a defence strategy.

Empirical research in Australia

Casey and Eddey (1986) studied takeover defence strategies of 122 Australian defended bids. Nineteen defence strategies were identified. Disclosure of favourable information (profit forecasts and asset revaluations) was the most popular defence strategy (after claims that the bid was inadequate). The extent to which each strategy was associated with successful takeover defences was analysed, and percentage success rates were ranked in descending order. Disclosure of favourable information ranked fifth out of six defence category strategies. By including profit forecasts in the '*Disclosure of favourable information*' defence category, Casey and Eddey (1986) implicitly assume that profit forecasts disclose good news.

2.5.4 Content analysis of disclosures

Content analysis of annual report disclosures

There have been many studies of disclosures in annual reports. These are summarised in table 2.5. In the first such study, Cerf (1961) found asset size, listing status and number of shareholders to be related to disclosure levels. Singhvi and Desai (1971) found a relationship between higher levels of disclosure and size, listing status, number of shareholders, accounting firm, rate of return

and earnings margins. Buzby (1975) found that extent of disclosure was positively associated with size but not with listing status.

Choi (1973) argues, in his capital need hypothesis, that companies competing for scarce capital resources as cheaply as possible are motivated to disclose more information to investors. Benefits of disclosure outweigh disadvantages (disclosure of sensitive information to competitors). Choi tested the effects of entry to the European capital market on the disclosure practices of a sample of Eurobond participants against a control group of nonparticipants. He applied a disclosure index to measure the level of disclosure. He concluded that firms examined significantly improved their financial disclosure on entry to the market.

Gray (1978) examined financial reporting practices of the 100 largest quoted industrial companies in the EEC in 1972/73 to assess the extent to which financial ratios and statistics are included in annual reports. He found support for the suggestion that the extent of disclosure is related to the state of development of the national equity market.

Firth (1979) examined three groups of companies: 40 listed and 40 unlisted companies (paired on the basis of size and industry) and a separate sample of 100 listed companies. He found that companies with a stock market listing disclosed significantly more information. A significant association between size and levels of disclosure was also found. Auditors were found to have very little influence on the levels of disclosure made by companies.

Firth (1980) compares the improvement in levels of disclosure of companies who had made new issues or rights issues with a matched-pairs control group which had not raised any new capital. Smaller firms increased their voluntary disclosure levels significantly when raising new capital. Raising finance on the equity market had no impact on disclosure levels of large firms. Firth suggested that there may be less scope for larger firms to improve significantly the extent of financial information in their annual reports.

Kahl and Belkaoui (1981) investigate the extent of disclosure in the annual reports of 70 banks in 18 countries. Disclosure adequacy is measured by the extent to which 30 selected information items are presented in annual reports. They found considerable variance in extent of disclosure internationally, and found firm size to be moderately significant.

In examining discretionary disclosure practices of New Zealand companies, McNally, Eng and Hasseldine (1982) found only company size to be a significant variable.

Chow and Wong-Boren (1987) attempt to explain differences in disclosure levels in the context of an agency-cost model. They examine the voluntary disclosure practices of 52 Mexican companies against three variables suggested by agency theory: firm size, financial leverage and proportion of assets in place. The disclosure scores were significantly related to size and were marginally correlated with leverage. Correlation with assets in place was not significant.

Cooke (1989) examines the extent of disclosure by Swedish companies against the variables: quotation status, parent company relationship, annual sales, total asset size and number of shareholders. He found significant differences between unlisted, only listed on the Stockholm Stock Exchange and multiple listed firms. He also found size to be a significant explanatory variable.

Meek and Gray (1989), in their study of the voluntary disclosure practices of European companies on the London Stock Exchange, found companies exceed the stock exchange requirements through a wide range of, and often substantial, voluntary disclosures. They suggest that this disclosure in excess of the minimum is necessary if these companies are to compete in the international capital market. Bradbury (1992b) tests Choi's capital need hypothesis. He predicts that the presence of overseas funding to a firm could influence its decision to disclose segment data. The results do not support this prediction. He finds that the dummy variable for the presence or absence of overseas debt is not significant.

Table 2.5 Summary of content analysis studies and voluntary disclosure

Study	Event	Sample Size	Methodology	Variables of interest	Summary of study results
Singhvi & Desai (1971)	Disclosures in annual reports	151	Regression	Extent of disclosure, size, listing status, auditors, profitability.	Firms with inadequate disclosure were smaller, unlisted, had small firms of auditors and were less profitable.
Choi (1973)	Disclosure by Eurobond participants	72	Wilcoxon matched-pairs signed ranks test	Difference in disclosure level of control and experimental group.	Experimental groups significantly increased their voluntary disclosure levels on entry to the Eurobond market.
Buzby (1974)	Disclosures in annual reports	88	Spearman rank correlation	Ranks assigned by analysts, mean disclosure score.	The extent of disclosure by the sample of small and medium companies was low, and the correlation between importance and disclosure of items was small.
Buzby (1975)	Disclosures in annual reports	88	Wilcoxon matched-pairs signed ranks test Kendall rank correlation	Disclosure score, size, listing status.	Extent of disclosure is positively associated with size but not with listing status.
Stanga (1976)	Disclosures in annual reports	80	Regression	Disclosure score, industry, size.	Differences in firm size were not related to disclosure. However, industry was significant.
Barrett (1976)	Disclosures in annual reports of seven countries	103	No statistical tests applied	Disclosure score, degree of consolidation, comprehensiveness of income.	UK and US firms had higher disclosure scores and more comprehensive financial statements than the other five countries.

Table 2.5 Summary of content analysis studies and voluntary disclosure (continued)

Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Gray (1978)	Disclosure of statistical information by EEC countries	100	Chi-square test	Business highlights statements, statistical summaries, key ratios, communications techniques.	UK disclosure was superior, supporting the view that extent of disclosure is related to development of equity markets. Superior communication techniques were used by European firms.
Firth (1979)	Disclosures in annual reports	180	Wilcoxon matched-pairs signed ranks test Kendall rank correlation	Level of disclosure, size, listing, auditors.	Listed companies disclosed significantly more. A significant association between size and disclosure was found. Auditor had no impact.
Firth (1980)	Extent of change in voluntary disclosure	281	*t*- test	Increase in disclosure levels.	Smaller sized companies, but not larger companies, increased disclosure significantly when raising new finance on the stock market.
Kahl & Belkaoui (1981)	Disclosure by international banks	70	Spearman rank correl. *t*-test	Disclosure scores, 18 countries, size.	Considerable variability in disclosure between countries was found. There was a weak correlation between size and disclosure.
McNally, Eng & Hasseldine (1982)	Voluntary disclos-ure in New Zealand	103	Spearman correlation Kruskal-Wallis test	Disclosure scores, size, rate of return, growth, auditor, industry.	Only size was significant.
Firth (1984)	Extent of voluntary disclosure and risk	100	Regression	Disclosure, leverage, risk, size, dividend yield.	There was no evidence that the disclosure level had any impact on the level of systematic risk.
Chow & Wong-Boren (1987)	Voluntary disclosure by Mexican firms	52	Pearson correlation Spearman correlation Regression analysis	Size, leverage, proportion of assets in place.	Extent of disclosure was positively and significantly related to firm size but not to leverage or assets in place.

Table 2.5 Summary of content analysis studies and voluntary disclosure (continued)

Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Meek & Gray (1989)	Disclosure by continental companies listed on London Stock Exchange	28	Descriptive study	Voluntary disclosure items.	Continental European companies disclosed more than the minimum requirements of the London Stock Exchange.
Cooke (1989)	Disclosure by Swedish firms	90	Regression analysis	Quotation status, size, parent company relationship.	Disclosure was very variable. Listing status and size were significant in explaining extent of disclosure.
Cooke (1992)	Voluntary disclosure by Japanese firms	35	Regression analysis	Disclosure, size, listing status, industry.	Multiple listed firms and larger firms disclosed significantly more information than other firms, as did manufacturing firms.
Cooke (1993)	Voluntary disclosure in Japanese Commercial Code and Securities and Exchange Law accounts	35	*t*- test Mann-Whitney U test	Disclosure, listing status.	No difference was found between the two types of Japanese accounts. There was no significant difference between disclosure and listing status except for unlisted and domestic listed firms.
Malone, Fries & Jones (1993)	Extent of disclosure by oil and gas firms	125	Chi-square Regression analysis	Disclosure score, listing status, size, auditor, debt equity ratio, profitability, industry, outside directors, foreign activities, number of shareholders.	Only three variables were significant: listing status, debt equity ratio and number of shareholders.
Wallace, Naser & Mora (1994)	Disclosure by Spanish companies	50	Rank (OLS) regression	Disclosure score, total assets, sales, gearing, earnings return, profit margin, liquidity ratio, industry, listing status, auditor.	Disclosure was positively related to firm size and listing status, and negatively related to liquidity.

In a study of Japanese corporations, Cooke (1992) finds size and listing status to be important explanatory variables. He considers eight size variables: capital stock, turnover, number of shareholders, total assets, fixed assets, current assets, shareholders' funds and bank borrowings. Cooke found manufacturing corporations disclosed significantly more information than other types of Japanese corporations. The interaction between industry type and quotation status was also found to be significant. In a related study of disclosure in two different types of Japanese accounts, Commercial Code and Securities and Exchange Law accounts, Cooke (1993) found no difference in disclosures between the two types of accounts and, with one exception, no difference in disclosure and listing status. Disclosures in Commercial Code unlisted and domestic listed accounts differed significantly.

Malone, Fries and Jones (1993) attempt to control for differences in disclosure across industries by studying extent of disclosure in 125 oil and gas firms. Of ten independent variables, only four were found to be significant at the 20% level: exchange listing status, audit firm size, ratio of debt to equity and number of shareholders.

Disclosures in 50 Spanish annual reports are examined by Wallace, Naser and Mora (1994). Their disclosure index (called an index of comprehensive disclosure) is constructed differently from previous studies. The index is based on 16 mandatory items of disclosure. In addition, the depth of disclosure of each item is also measured and includes both qualitative and quantitative disclosure. Nine variables were tested, but only the two size variables and liquidity were found to be significant. The relation between liquidity and disclosure was negative, contrary to expectations. Findings of this study are limited by the small size of the sample studied.

Content analysis of forecasts

There have been few previous studies of disclosure practices in profit forecasts. Dev (1973) gives some examples of the variety of wording used in forecasts (the

meaning of which, in some cases, was unclear). Dev also finds that none of the forecasts in her study included a statement of assumptions.

Hartnett (1990) examines disclosure frequency, form and content (including the period forecast), manner of presentation and location in the listing document of 22 forecasts from a sample of 50 second board company new listing prospectuses on the Sydney Stock Exchange. Hartnett, like Dev (1973), found considerable variation in the terminology used in the forecasts.

Montgomerie and Walker (1992), a descriptive study, examine accounting policies and disclosure of components and items in a selection of profit forecasts. They show, using examples from prospectuses, the subjective nature of forecasting, focusing particularly on choice and application of accounting policies in forecasts. Montgomerie and Walker comment that '*published profit forecasts contain very little information on how the figures are built up. They range from being one line statements citing a figure that will be achieved to, at the most, three or four lines disclosing key figures with a few accompanying notes*'.

2.5.5 News content of forecasts

Table 2.6 summarises research into news content of forecasts. Early analytical studies of disclosure suggest that information will be disclosed when there is good news to report. Many US empirical studies have tested this prediction. The evidence has been mixed and does not support the hypothesis that managers are more likely to disclose good news forecasts to convey favourable earnings information. Empirical studies provide evidence of disclosure of bad news. More recent analytical models have included competitors to account for disclosure of bad news in some circumstances.

Table 2.6 Summary of empirical research on news content of forecasts

Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Patell (1976)	Forecast disclosure	336F	OLS regression Kolmogorov-Smirnov one-sample test	Forecast disclosure, stock returns.	Large positive stock returns were found in the week of forecast release.
Penman (1980)	Forecast disclosure	727F	Hotelling's T^2 test *t*-test	Unexpected annual earnings, portfolio returns, excess returns.	Forecasts have information content for valuing shares. Returns of forecasting firms are on average higher than for the market as a whole.
Ajinkya & Gift (1984)	Forecast disclosure	259F 518NF	ANOVA	Forecast signal, cumulative stock return.	The results support the hypothesis that good news and bad news forecasts are voluntarily disclosed by management.
Waymire (1984)	Forecast disclosure	479F	Chi-square	Stock returns, forecast deviation.	There is both good and bad news disclosure but the sample is dominated by good news.
McNichols (1989)	Forecast disclosure	733F	Pearson correlation Spearman correlation F-statistic	Cumulative return prediction errors, forecast errors, forecast deviations.	Stock prices reflect information beyond that in the forecasts. No support is provided for a tendency to issue good news forecasts.
Ruland, Tung & George (1990)	Forecast disclosure	146F 146NF	Pearson correlation, Probit analysis	Analyst forecast error, new offerings, % stock held by owners.	Good news hypothesis was not supported. Managers' forecasts confirm rather than correct analysts' forecasts.
Lev & Penman (1990)	Forecast disclosure	1,575F 1,575NF	*t*-test Chi-square	Stock price changes.	On average, forecast news is good news but some firms disclose forecasts that decrease stock prices.

Table 2.6 Summary of empirical research on news content of forecasts (continued)

Study	Event	Sample size	Methodology	Variables of interest	Summary of study results
Clarkson, Dontoh, Richardson & Sefcik (1992)	Forecast disclosure in Canadian prospectuses	70F 51NF	Chi-square Wilcoxon rank sum test Regression	Proxies for market expectations, initial market value, size, debt equity ratio, industry, auditor and underwriter prestige, terms of offerings, retained ownership.	Results are consistent with the hypotheses that forecasters have good news to reveal and that the market is able to correct for expected forecast bias/error.
Pownall, Wasley & Waymire (1993)	Disclosure of different types of forecasts	1,252F	GLS SUR regression F-statistic	Stock returns, forecast form, forecast errors, forecast horizons, unexpected component of disclosures.	No significant difference in price response to different types of forecast was found. Point forecasts are associated with more positive and significant price reactions than other types of forecasts.
Baginski, Hassell & Waymire (1994)	Disclosure of preliminary earnings estimates	400	Z-test Two tailed sign test	Stock returns, analyst following, disclosure type, disclosure frequency.	Significant negative mean abnormal returns are associated with preliminary estimates. No strong relationship was found between timing and news content.
Skinner (1994)	Disclosure of bad news	266F	Logistic regression	Type of disclosure, news content, stock returns.	Good news disclosures tend to be quantitative; bad news qualitative. Stock price response is greater to bad news.
Frankel, McNichols & Wilson (1995)	Disclosure of forecasts by firms raising finance in capital markets	1,880	Wilcoxon tests Probit analysis	Probability of a forecast, firm size, external financing.	Average forecast deviations are insignificantly different from zero, suggesting that disclosure is not motivated solely by a desire to reveal favourable news.

Empirical evidence of the role of good news in motivating forecast disclosure is mixed. Patell (1976), Penman (1980), Waymire (1984) and Lev and Penman (1990) find that earnings forecasts are in general associated with positive returns, and that firms with good news appear more willing to reveal their forecasts. Lev and Penman (1990) consider forecast disclosure from a signalling perspective.

They predict that firms with above average values of the signalled attribute - annual earnings - will distinguish themselves by releasing a forecast. They find, consistent with their signalling hypothesis, that while there is some release of bad news, firms with good news do voluntarily release forecasts in order to distinguish themselves from firms with worse news. Forecasting firms exhibited higher earnings changes than firms in general, but also had on average higher stock value appreciations. Forecast disclosure was thus associated with an above-average valuation of the attribute forecasted - annual earnings.

As there were several bad news forecasts in the samples, there must be some incentives for management to publish these forecasts even though they result in downward revaluation. Thus, while firms typically publish earnings forecasts when they have good news, this is not always so.

The results of these studies suggest that such a disclosure characterisation (mainly good news forecasts disclosed) does not fully capture actual practice. This may be because results are based on average figures.

Research based on later time periods indicates that firms are as likely to issue good news forecasts as bad news forecasts. Ajinkya and Gift (1984) and Waymire (1984) did not observe an overall tendency to report good news. They show that incentives exist for management to disclose both good and bad news; thereby implying a relatively full symmetric disclosure of private information on a voluntary basis. In the case of the management forecast signal, the summary statistics provide evidence of an adequate representation of negative or bad news signals disclosed voluntarily.

Consistent with much of the recent empirical literature, Ruland, Tung and George (1990) found no significant differences between errors in analysts' forecasts for forecasting and nonforecasting firms. Consequently, they do not support the hypothesis that managers primarily release good news.

Recent US research had focused more on bad news disclosures and on different types of forecast disclosures. Baginski, Hassell and Waymire (1994), Pownall, Wasley and Waymire (1993) and Skinner (1994) provide evidence that firms are more likely to disclose bad news than good news. Baginski, Hassell and Waymire (1994) document significant negative mean abnormal returns associated with disclosure of preliminary estimates. They also find the median return to be negative but not significantly so. There were 251 bad news disclosures in Skinner (1994) compared with 191 good news disclosures.

One explanation for the variations in US findings is that most studies examine only point and range forecasts of annual earnings (e.g. Penman, 1980; Ajinkya and Gift, 1984; Waymire, 1984; McNichols, 1989; Pownall and Waymire, 1989) or very quantitative forecasts (e.g. Patell, 1976). Lev and Penman (1990) and Skinner (1994) consider point and range forecasts and, in addition, open ended (i.e. bounded from either above (upper-bound) and below (lower-bound)) and qualitative forecasts. Similarly, Baginski, Hassell and Waymire (1994) consider minimum, maximum and 'general impression' estimates as well as point and range estimates. Pownall, Wasley and Waymire (1993) find no significant differences in stock returns for different forecast types, although point forecasts were associated with more positive and more significant returns. Point and range forecasts comprised less than 20 percent of their sample.

Research in jurisdictions other than the US support the good news hypothesis. In a study of disclosure of forecasts in initial public offering prospectuses in Canada, Clarkson, Dontoh, Richardson and Sefcik (1992) found that the mean value of the good news measure for forecasters significantly exceeded nonforecasters. Clarkson, Kao and Richardson (1994) examined the inclusion of forecasts in annual reports. Using three methods of classifying news they find, irrespective of

approach used, that the proportion of forecasters with good news earnings prospects is significantly greater than the proportion of nonforecasters with good news earnings prospects. However, when financial market and product market considerations are included, Clarkson, Kao and Richardson (1994) find, consistent with more recent US literature, that the good news hypothesis offers only partial explanation for the decision to forecast.

2.6 Summary and conclusions

This chapter has summarised the theoretical literature dealing with voluntary disclosure of information by firms, particularly in circumstances where there is information asymmetry. Much of the information economics literature is concerned with signalling theory where firms attempt to signal their superior quality by voluntarily disclosing information about the firm.

<u>Influences on disclosure of forecasts</u>

Signalling theory, and empirical studies applying signalling theory, were reviewed. Nearly all signalling research examines the effect of various signals on pricing of new issues. Signalling variables such as retained ownership, choice of auditor and choice of advisors were generally found to be related to less underpricing of IPOs, but the findings are not unanimous. There has been no support for Trueman's (1986) hypothesis that the act of disclosing a forecast is a signal of value.

Empirical evidence of agency theory explanations of cross-sectional variation in voluntary accounting and disclosure choices has been weak and inconclusive. In the only agency theory study of forecast disclosure, ownership structure was found to be the most important factor distinguishing disclosing and nondisclosing firms. Various other empirical studies on voluntary disclosure, and especially on voluntary disclosure of forecasts, are reviewed.

Forecasting and nonforecasting firms were found to differ most on size and earnings variability. Motivations explored by previous research to account for

forecast disclosure include raising finance, threat of competitor entry and in response to legal pressures.

Influence of market expectations

Ajinkya and Gift (1984) found support for their hypothesis that forecasts are disclosed to correct prevailing market expectations, as did Skinner (1994). Ruland, Tung and George's (1990) findings suggest that forecasts tend to confirm rather than correct analysts' forecasts.

Profit forecasts as defences

Studies of defences strategies are of two types. Most examine the effect of the use/adoption of a defence strategy on shareholders' wealth. A minority (mainly UK and Australian) analyse the effect of defence strategies on outcome of bids, where outcome is defined as success/failure of the bid. These studies also analyse the frequency of adopting different defence tactics. The research finds disclosure of profit forecasts to be one of the most popular methods of defence. However, evidence on its effectiveness is weak. In the most comprehensive study, Sudarsanam (1994) found profit forecasts made a slightly negative impact on bid defences.

Content of disclosures in forecasts

Studies analysing disclosure content (mainly in annual reports) are not well grounded theoretically. A variety of variables have been tested. Size and listing status were most commonly related to extent of disclosure in annual reports.

News content in forecasts

The chapter concluded by considering news content of forecasts disclosed. Previous research (almost entirely North American) has shown that predominantly good news forecasts are disclosed, with some disclosure of bad news. More recent studies have included range forecasts and non-quantified forecasts as well as point forecasts of earlier studies. This is thought to account for the increasing evidence of bad news forecasts.

Application to current study

Actual disclosures take place in an environment that is substantially more complex than the ones assumed in many of the models described in this chapter. Managers may be concerned with how disclosures about their firms' financial performance impinge on their reputations, influence their firms' negotiations with labour unions and other suppliers of inputs, affect their firms' relationships with governmental and other authoritative bodies, change the behaviour of competitors and so on.

Almost all the empirical literature reviewed in this chapter relates to disclosure of information in a general context (such as in annual reports). The takeover context of this research is very specialist. Companies have very specific reasons during a takeover why they might want to disclose information. Signalling theory and agency theory have been advanced to explain the impact of corporate characteristics on voluntary disclosure. This research will extend the application of signalling theory and agency theory to a new disclosure situation - that of disclosures made during takeover bids. There is some doubt, however, on their relevance to the takeover context of the research.

Most studies consider agency theory and signalling theories separately. Morris (1987) analysed the logical relationship between signalling and agency theories and concluded that the two are consistent - that if one is 'correct' then the other may also be 'correct'.

Morris suggested that this '*opens up the possibility of joining the two theories to provide fresh insights into the principal-agent problem, and into firms' accounting policy choices*'. Morris also suggested that it may be possible to combine the two theories to yield predictions about accounting choices not obtainable from either theory alone. This study will be one of the few empirical research studies that test the two theories together.

Most of the takeover literature is concerned with shareholder wealth effects resulting from takeovers, with profitability of mergers, with financial

characteristics of firms involved in takeovers, with predicting takeover targets and with the effect of medium of exchange on takeovers. No prior research has examined the theories of voluntary disclosure in the context of takeovers.

More recent disclosure literature in the US is concerned with the influence of litigation on disclosure. The legal environment in the UK is wholly different. The risk of being sued is much less in the UK; class action suits are not possible. As confirmed by the interviews in chapter 5, threat of litigation is not as significant a factor in the UK. Management are more concerned with loss of reputation if forecasts go wrong than with fear of litigation. There has been little litigation in the UK on profit forecast disclosure during takeover bids.

This study extends to the UK North American research on the influence of market expectations on forecast disclosure and of the news content of forecasts to the UK. Similar methodology is employed.

The effectiveness of a single defence strategy, disclosure of profit forecasts is examined. The outcome of bids based approach of previous research is extended to include a new definition of outcome, based on whether the offer price increased during the bid.

Content analysis methodology applied in previous research to annual reports is adapted and applied in a content analysis of disclosures in profit forecasts. Previous research has measured disclosure content using a disclosure index. It is not possible to develop an index of disclosure for profit forecasts. This research uses a counting approach to measure disclosure and applies suitable statistical methods to analyse count data.

The research study that follows attempts to explain disclosure of forecasts during takeover bids by considering the rich and complex environment in which disclosure takes place and the wide variety of variables suggested by the literature, summarised in this chapter, that might influence disclosure.

Chapter 3: RESEARCH QUESTIONS AND HYPOTHESES

The major objectives of this research are, firstly, to examine the influences on disclosure of profit forecasts in the context of takeover and, secondly, to examine the influences on the content and presentation of forecasts disclosed. Influences on disclosure are examined under the five research headings outlined in chapter 1:

- What factors, including firm characteristics, significantly influence voluntary disclosure of profit forecasts?
- What effects do prevailing market expectations of firm profitability have on disclosure?
- Is forecast disclosure an effective weapon in defence or completion of bids?
- Does disclosure content of forecasts vary with external factors?
- Do the forecasts have identifiable news content characteristics?

Chapter 2 has outlined the theories and empirical research on disclosure by firms. The variables hypothesised to influence the disclosure decision, and discussed in more detail in chapter 2, are summarised in Figure 3.1. Two theories, signalling theory and agency theory, provide the basis for hypothesising that some variables are related to disclosure of forecasts and information in forecasts. In addition, other variables found to be related to voluntary disclosure decisions in prior empirical research are also tested, as are a number of control variables. The takeover context of the research suggests additional factors for testing.

The research tests as many of these variables as possible against forecast disclosure decisions, subject to the practical limitations of the necessary data being reasonably available. Thus, a large number of variables are included in the study. For convenience, and to provide a structure in presenting the hypotheses and empirical results, the variables tested in the research are categorised under three headings: (i) takeover-context variables, (ii) firm-specific variables, and (iii) forecast-related variables. These three headings are used to present the hypotheses for testing that follow.

Figure 3.1 Influence of variables on disclosure

AGENCY THEORY	SIGNALLING THEORY	OTHER VARIABLES	TAKEOVER - CONTEXT VARIABLES
Size (Salamon & Dhaliwal (1980); Leftwich, Watts & Zimmerman (1981); Bazley, Brown & Izan (1985); Chow & Wong-Boren (1987); Deegan & Hallam (1991); Bradbury (1992a & 1992b); Kelly (1994) Leverage Leftwich, Watts & Zimmerman (1981); Chow & Wong-Boren (1987); Wong (1988) Ownership control Leftwich, Watts & Zimmerman (1981); Whittred (1987); Ruland, Tung & George (1990); Craswell & Taylor (1992) Ownership control - dispersion in shareholdings Schipper, 1981 Capital intensity Leftwich, Watts & Zimmerman (1981); Chow & Wong-Boren (1987); Wong (1988) Monitoring agents Leftwich, Watts & Zimmerman (1981); Bazley, Brown & Izan (1985); Craswell & Taylor (1992); Kelly (1994) Exchange listing Leftwich, Watts & Zimmerman (1981)	Good news Hughes (1986); Ruland, Tung & George (1990); Quality of advisor- Auditors Titman & Trueman (1986); Beatty (1989); Balvers, McDonald & Miller (1988); Feltham, Hughes & Simunic (1991); Menon & Williams (1991); Firth & Smith (1992); Clarkson, Dontoh, Richardson & Sefcik (1992); Holland & Horton (1993); How, Izan & Monroe (1995) Quality of advisor- Investment banker Downes & Heinkel (1982); Titman & Trueman (1986); Simunic & Stein (1987); Beatty (1989); Balvers, McDonald & Miller (1988); Menon & Williams (1991); Keasey & McGuinness (1991); Clarkson, Dontoh, Richardson & Sefcik (1992); Holland & Horton (1993); How, Izan & Monroe (1995) % Equity held by entrepreneur Downes & Heinkel (1982); Simunic & Stein (1987); Beatty (1989); Keasey & McGuinness (1991); Menon & Williams (1991); Clarkson, Dontoh, Richardson & Sefcik (1992)	Industry Stanga (1976); Ruland (1979); Cox (1985); Lev & Penman (1990); Clarkson, Dontoh, Richardson & Sefcik (1992); Cooke (1992); Malone, Fries & Jones (1993); Clarkson, Kao & Richardson (1994); Wallace, Naser & Mora (1994) Economic conditions McDonald (1973); Porter (1982); Mak (1989) Earnings variability Imhoff (1978); Ruland (1979); Cox (1985); Waymire (1985); Lev & Penman (1990); Market risk Imhoff (1978); Firth (1984); Lev & Penman (1990); Kasnik & Lev (1995)	Party to the bid Tzoannos & Samuels, 1972; Levine & Aaronovitch, 1981; Hasbrouck, 1985; Palepu, 1986; Barnes, 1990; Powell, 1995 Nature of bid Mørck, Shleifer & Vishney, 1988 Type of purchase consideration Carleton, Guilkey, Harris & Stewart (1983); Franks, Harris & Mayer (1988); Eckbo & Langohr (1989)

↓

→ VOLUNTARY DISCLOSURE DECISION ←

3.1 Factors influencing disclosure of forecasts

The reasons why and incentives for management of some companies to disclose a profit forecast during a takeover bid, and the factors underlying the decision to disclose/not disclose, are examined. The characteristic differences between disclosing and nondisclosing firms are highlighted.

3.1.1 Takeover-context variables (H_1-H_5)

Economic conditions

Forecasting is expected to be more difficult during changeable economic periods. Economic conditions have been found to affect forecast accuracy (McDonald, 1973; Porter, 1982; Mak, 1989). In addition to the effect on forecast accuracy, which in turn influences disclosure, economic conditions may also affect whether companies have good news to disclose. During recessionary periods there may be less good news. Thus, economic conditions may affect the disclosure decision, and the five year period chosen for study needs to be controlled for. Year is taken to proxy for economic conditions. As there is no *a priori* expectation of the direction of the influence of year on disclosure, the hypothesis is expressed in null format.

H_1: There is no difference in the disclosure of forecasts in any year of the study.

Party to the bid

Previous research has shown the characteristics of bidders and targets to differ (Tzoannos and Samuels, 1972; Levine and Aaronovitch, 1981; Hasbrouck, 1985; Palepu, 1986; Barnes, 1990; Powell, 1995). Motivations for disclosure by bidders and targets during takeover bids may differ substantially. Consequently there may be differences in disclosures between these two groups. For example, bidders and targets may differ in terms of the forecastability of profits. Hence, variation in disclosure could be due to variation in the features of the company, rather than variation in disclosure issues.

More targets are expected to disclose forecasts than bidders. Evidence from informal interviews of advisors, directors and management of companies involved

in takeovers (see chapter 5 for details) suggests that the benefits of disclosing forecasts are much greater for target companies than for bidders. Bidding companies control the timing of an approach and are more likely to make a bid when market conditions are favourable to the bidder. Bidders will therefore have less need to communicate with shareholders. Target companies have no such control over events and therefore have a greater need to signal information to shareholders to adjust market expectations. Consequently, the disclosure of forecasts by bidders is analysed separately from disclosure by targets. A comparison of the results between the two groups is then made.

H_2: *Target companies are more likely to voluntarily disclose forecasts than bidders.*

Type of bid

Characteristics of target firms differ depending on whether they are the subject of contested or uncontested bids (Mørck, Shleifer and Vishney, 1988). The type of bid may also influence the propensity of firms to disclose information. There is evidence from MCRV (Gray, Roberts and Gordon, 1991) that more forecasts are voluntarily disclosed during contested bids. Contested bids are characterised by attacks on the performance of management. Bidders suggest that their management would improve the performance of the target company. Targets try to show that they have managed the company well and that bidders' management have run the bidding company badly. Managements defending their performance, especially target company managements, are attacked when they do not disclose a forecast to support their claims of good performance (see examples 4 to 7 in appendix 4).

The effect of competitive environments on disclosures in annual reports has been examined previously by Choi (1973). Choi found that firms competing for scarce capital upgraded and increased financial disclosure. Choi's competitive disclosure/capital need hypothesis is particularly relevant in the competitive environment of takeover bids, especially contested bids. Following this theory, in

contested bid situations one would hypothesise that more forecasts would be disclosed.

H_3: More forecasts are disclosed during contested bids than during agreed bids.

Purchase consideration

Purchase consideration ranges from cash to paper to a mixture of both. Previous research has shown purchase consideration to be an important influence on the outcome of takeover bids (Carleton, Guilkey, Harris and Stewart, 1983; Franks, Harris and Mayer, 1988; Eckbo and Langohr, 1989). The influence of method of payment on disclosure has not be tested in prior research.

The interviewees (see chapter 5) frequently referred to this as influencing disclosure, especially in the case of bidders. If the consideration is cash, a forecast by bidders may not be as relevant. From a bidder's point of view, one of the main reasons for disclosing a forecast is to add credibility to the value of the shares being issued in consideration for the target.

A forecast may be disclosed, however, in cash only bids because bidding company shareholders may need to approve the bid. Bidders' average share prices fall at the announcement of bids (Limmack, 1991) hence, even in cash underlined bids, a forecast is potentially useful. Also, legal considerations may prompt disclosure of forecasts by bidders. In summary, forecasts are hypothesised to be disclosed by bidders primarily during paper bids.

H_4: Forecasts by bidders are more likely during paper bids.

: No relation is expected between forecast disclosure by targets and purchase consideration.

Bid horizon

Disclosure of forecasts has been found to increase towards the end of reporting periods. Evidence from the US suggests that the frequency of forecasts increases as the end of the reporting period approaches (McNichols, 1989). The closer the

year end the less risk there is of the forecast being wrong. Thus, forecasts are hypothesised to be more likely the shorter the bid horizon.

H_5: Fewer forecasts are disclosed in bids with longer than with shorter bid horizons.

3.1.2 Firm-specific variables (H_6-H_{14})

Size of firm

There are various reasons why size might be related to disclosure. It is less costly for larger companies, with more sophisticated accounting and forecasting systems, to disclose forecasts. The cost of assembling the information is greater for small firms than large firms (SEC, 1977). This is particularly likely in the context of publishing a formal profit forecast (within the fairly tight time constraints of a takeover bid) which would need reliable forecasting systems. Financial advisors indicated (see chapter 5) that they would be unwilling to report on a forecast from an unreliable forecasting system.

Agency theory predicts that larger firms with greater political visibility (and therefore greater political 'agency' costs) will disclose more to reduce agency costs. Voluntary disclosure may be encouraged by expectations of positive effects in political attitudes. Beneficial effects are unlikely if disclosures reveal situations of monopoly advantage, tax anomalies or social inequality which encourage political intervention. Political costs in the context of a takeover might be investigation of the bid by the Takeover Panel or the Mergers and Monopolies Commission. Firm size has generally been used as a proxy for political costs.

Also, '*Large companies will disclose more information since they benefit most... If the initial information asymmetry is large, reducing it will increase the current share price of the security*' (Diamond and Verrecchia, 1991). Leftwich, Watts and Zimmerman (1981) have suggested that the proportion of outside capital tends to be higher for larger firms, and they include a size variable to proxy for the agency costs of outside capital.

Another possible explanation relating size to disclosure is that large firms have a greater need for disclosure as their shares are more widely traded. Small firms are more reluctant to disclose because this may place them at a competitive disadvantage. Verrecchia (1979) suggests that accounting reports are more valuable to investors in smaller firms and therefore smaller firms may supply accounting reports prior to disclosure laws. Bradbury (1992a) tested size for this reason but did not find any relation between it and voluntary disclosure of interim earnings.

Leftwich, Watts and Zimmerman (1981) and Bradbury (1992b) included size to proxy for agency costs of capital held by outsiders. Bazley, Brown and Izan (1985), Wong (1988) and Craswell and Taylor (1992) used size to proxy for political costs.

Results of prior research have been inconclusive. Wong (1988) and Deegan and Hallam (1991) found size to be a significant variable in the disclosure of current cost accounts and value added statements. A positive association between size and voluntary segment disclosures (Salamon and Dhaliwal, 1980; Bradbury, 1992b) has been found. Leftwich, Watts and Zimmerman (1981), Bradbury (1992a) and Craswell and Taylor (1992) found no support for size as an explanation of disclosure.

In support of Verrecchia's (1979) hypothesis, Bazley, Brown and Izan (1985) found that the mean asset size of the firms voluntarily adopting lease disclosure (prior to their being made mandatory) was smaller than for nondisclosing firms.

Cox (1985) included firm size because of its potential ability to indirectly influence the amount of information content in management forecasts. Underlying theory posits that larger firms disclose more external information so that there is less of a difference between the market expectations and the information revealed when the item is disclosed. The greater the amount of pre-disclosure information production and dissemination, the greater the ability of market participants to anticipate the content of regularly issued disclosures such as earnings forecasts (in the US).

Cox (1985), Waymire (1985) and Lev and Penman (1990) reveal that firm size differentiates between forecasting and nonforecasting firms. They point out that this could be due to bias in the reporting practices of the *Wall Street Journal* (source of their forecasts). Large firms are reported more often in the press. Clarkson, Kao and Richardson (1994) also found size to distinguish Canadian forecasters and nonforecasters.

Economies of scale in disclosure and litigation deterrence (larger firms are more exposed to litigation as they are seen to have '*deeper pockets*') are two reasons put forward by Kasznik and Lev (1995) explaining why size might be related to disclosure. They found firm size to be a significant explanatory variable for their group of good news firms as well as bad news firms.

Size proxies for many variables. As Ball and Foster (1982) point out, results confirming a size hypothesis may have alternative explanations. Care must be taken in interpreting the results of tests including this variable. Larger bidders and targets are hypothesised to be more likely to disclose a forecast.

H_6: Larger firms voluntarily disclose more forecasts compared with smaller firms.

Leverage

Jensen and Meckling (1976) and Smith and Warner (1979) have observed that agency costs are higher for firms with proportionally more debt in their capital structure. As the proportion of debt increases, shareholders, and managers acting on behalf of shareholders, have greater incentives to transfer wealth from bondholders. This implies that the greater the proportion of debt in a firm's capital structure, the higher the probability of the firm adopting contracting and monitoring activities. As leverage increases, lenders and shareholders may demand more information in order to assess the probability of a firm meeting its debt obligations. Thus, the demand for information by shareholders and debtholders will increase with level of debt. This suggests a

positive relationship between the extent of voluntary disclosure and high leverage. Watts (1977) hypothesised that *'the larger the absolute amount of corporation's outside risk debt, the greater the likelihood the corporation presented financial statements'* (i.e. voluntarily). Watts and Zimmerman (1986) argue that the potential for conflict between shareholders, debtholders and management is high in firms with large outside capital. This suggests a positive relationship between the extent of voluntary disclosure and leverage.

Under the free cash flow model of Jensen (1986) the lower the free cash flow, the higher the debt and, consequently, the lower the monitoring costs between shareholders and management. The firm's management is to some extent controlled and disciplined by the providers of debt. In situations like this, shareholders are supposed to have superior monitoring and bonding facilities in contrast to all equity financed firms. Thus, the direction of the relationship between leverage and disclosure is not clear from the literature.

A positive association between financial leverage and voluntary segment disclosures (Salamon and Dhaliwal, 1980; Bradbury, 1992b) and financial leverage and voluntary current cost disclosures (Wong 1988) has been found, but the evidence is not unanimous (Leftwich, Watts and Zimmerman, 1981; Bazley, Brown and Izan, 1985; Kelly, 1994). Given the weight of evidence linking leverage with increased disclosure, firms with greater financial leverage are hypothesised to be more likely to disclose a forecast.

H_7: Firms with high debt-equity ratios voluntarily disclose more forecasts than firms with low debt-equity ratios.

Management ownership

Agency theory posits that firms will voluntarily disclose information to reduce agency costs. The degree of conflict between managers and shareholders is predicted to increase inversely with managers' ownership share (Jensen and Meckling, 1976). Therefore, as managers' ownership share falls, monitoring and bonding costs will

increase. Firms with lower percentage management ownership will have a higher level of monitoring and are more likely to disclose forecasts.

Whittred (1987) found ownership control to be a significant variable in determining whether firms prepared consolidated accounts (prior to this being mandatory). Craswell and Taylor (1992), in the context of oil and gas reserves disclosure, found no such support. Ruland, Tung and George (1990) tested agency theory in the context of the voluntary disclosure of earnings forecasts. The only agency theory variable examined was ownership structure, being the percentage of voting stock owned by officers and directors. Consistent with expectations, they found management ownership to be significantly lower for forecast disclosing firms.

H_8: *More forecasts are voluntarily disclosed by firms with a lesser percentage of management ownership than firms with a greater percentage of management ownership.*

Substantial shareholdings

Firms with higher concentrations of large shareholders are more likely to be able to communicate information to shareholders privately. Consequently, firms with higher substantial shareholdings are less likely to publicly disclose forecasts.

There is evidence from prior research, confirmed by the takeover documents examined and from the interviews conducted as part of this research, that there is considerable private disclosure of financial information to interested parties - see examples 69 to 71 in appendix 4. Since the period of this study, new insider trading legislation has discouraged such private disclosure. Firms with a larger proportion of share capital concentrated amongst a few large shareholders are likely to find disclosure of such private information easier than firms with more dispersed shareholdings and so can avoid public disclosure of information.

Schipper (1981) argues this point from an agency perspective by stating '*monitoring problems that could be solved by issuing public accounting reports would be*

increasing in the number of owners...'. The variable, percentage substantial shareholdings, attempts to measure dispersion in shareholdings of firms.

'H_9: *Firms with a larger percentage of substantial shareholdings disclose fewer forecasts than firms with a smaller percentage of substantial shareholdings.*

Auditor/reporting accountant

Choice of auditor is expected to influence disclosure for a number of reasons. DeAngelo (1981) found that 'high quality' audit firms with greater reputations are likely to encourage clients to follow high quality reporting practices. Auditor status is hypothesised as a means of signalling firm quality. Firms with higher reputation big-six auditors/reporting accountants are more likely to disclose forecasts. Titman and Trueman (1986) suggest that selection of a quality auditor is a signal to the market that the information disclosures of the firm are high quality.

Choice of 'high quality' auditors may reflect high agency costs which are expected to induce greater disclosure (Chow, 1982). High quality auditors may be chosen to minimise monitoring costs. Bazley, Brown and Izan (1985) tested auditor influence on lease accounting practices and found no significant influence. Craswell and Taylor (1992) studied voluntary disclosure of reserves by oil and gas firms and found, of the five variables examined, only auditor identity was significant.

H_{10}: *Firms engaging big-six auditors are more likely to disclose forecasts than firms with other auditors.*

Financial advisor

Financial advisor is included as a variable in the research for similar reasons to the auditor/reporting accountant variable. Financial advisors are also required to formally report on forecasts. Financial advisor prestige is hypothesised as a means of signalling firm quality. Firms with higher reputation financial advisors are more likely to disclose forecasts. In addition, the interview data in chapter 5 suggest that financial advisors greatly influence disclosure of forecasts.

H_{11}: Firms that engage higher reputation financial advisors are more likely to voluntarily disclose forecasts than firms with other financial advisors.

There are many events surrounding a takeover bid which make it difficult to devise a clean, controlled experiment in this context. The takeover context is a very 'muddy pond', surrounded by a lot of noise. There are many control issues to be dealt with. Three control variables are included in this research: listing status, industry and nationality of firms.

Listing status

Leftwich, Watts and Zimmerman (1981) tested exchange listing as a signal for the intensity of monitoring of managers by the firm. They expected some natural selection among firms in choosing the exchange to list on. Companies from two exchanges, the New York Stock Exchange and the American Stock Exchange, were examined. The New York Stock Exchange is more stringent and therefore offers investors more intensive monitoring. They did not find the variable to be significant.

All the target firms in this research are listed on the London Stock Exchange. However, bidders range from individuals, consortiums of individuals, private companies to foreign listed companies.

H_{12}: Bidding firms listed on the London Stock Exchange are more likely to voluntarily disclose forecasts than other firms.

Industry

Industry is predicted to be related to disclosure for a number of reasons. Different industries have different proprietary costs of disclosure. Proprietary costs arise when competitors and potential market entrants gain advantage from information disclosed by firms. Also, profits in some industries are easier to forecast than in others. Industry membership has been found to be related to the accuracy of forecasts disclosed (Jaggi, 1978). Regulated industries in the US, such as electric utilities, have been found to

have more accurate forecasts. Bazley, Brown and Izan (1985) included an industry variable because previous research found it to be correlated with accounting method choice. They found industry to be significantly related to frequency of voluntary disclosure of lease obligations. There is a need to control for industry in any study of voluntary disclosure. As the direction of the relationship between disclosure and industry is unknown, the hypothesis is expressed in null form.

H_{13}: Voluntary disclosure of forecasts is not affected by the industry of the firm.

Nationality

All targets are listed on the London Stock Exchange and are either UK or Irish companies. Many of the bidders are foreign. Consequently the sample of firms is made up of a mixture of nationalities. International accounting research has documented differences in disclosure practices by firms from different countries. In a recent study, Frost and Pownall (1994) find that voluntary disclosures are substantially more frequent in the US than in the UK. Biddle and Saudagaran (1989) compared disclosure rankings of eight countries in three prior studies and conclude that the US followed by the UK were consistently ranked highest on comprehensiveness of disclosure levels. Thus, UK firms are expected to disclose forecasts more frequently than other nationality firms. A dummy variable is included to control for the effect of nationality. The hypothesis is expressed in null form.

H_{14}: Voluntary disclosure of forecasts no different for UK firms than for other nationality firms.

In summary, it is hypothesised for both bidders and targets that disclosure of forecasts is a function of the various explanatory variables described above, as shown in table 3.1:

Table 3.1 Model of disclosure of profit forecasts

Disclosure = f (YEAR + BT + BID + CON + BHOR + SIZE + LEV + MO + SSH + AUD + MB + QUOTED + IND + NAT)

where:

YEAR	= Year of bid	MO	= Management ownership of firm
BT	= Party to the bid	SSH	= Substantial shareholdings in firm
BID	= Type of bid	AUD	= Auditor/reporting accountant
CON	= Purchase consideration	MB	= Financial advisor
BHOR	= Bid horizon	QUOTED	= Whether quoted
SIZE	= Size	IND	= Industry sector of firm
LEV	= Leverage	NAT	= Nationality of firm

3.2 Factors influencing disclosure of forecasts: market expectations (H_{15})

The expectations adjustment hypothesis of Ajinkya and Gift (1984) posits that firms are motivated to disclose information to align investors' expectations of future earnings. Support for this hypothesis is provided by Ajinkya and Gift (1984), Ruland, Tung and George (1990) and Skinner (1994). Thus, forecasts are more likely to be disclosed when investor perceptions are most out of line with company results. This point is mentioned by most interviewees in chapter 5.

H_{15}: Forecast disclosure is more likely when market expectations diverge most from actual performance.

3.3 Defensive role of profit forecasts (H_{16}-H_{19})

Disclosure of profit forecasts is analysed to see whether:

- Target companies issuing profit forecasts are more likely to successfully defend or obtain a price increase in contested bids.
- Bidding companies issuing profit forecasts are more likely to successfully complete contested bids.

Anecdotal evidence (for example, the interviews in chapter 5) suggests that disclosure of profit forecasts during takeovers has a significant effect on the outcome of bids. Empirical evidence, however, has been mixed. Whether disclosure of profit forecasts has strategic value is tested by the following four hypotheses:

H_{16}: Successful bidders are more likely to have disclosed a forecast.

H_{17}: Disclosure of a forecast by bidders makes no difference to whether the offer price was increased.

H_{18}: Successful defenders are more likely to have disclosed a forecast.

H_{19}: An increase in offer price is more likely where the target has disclosed a forecast.

3.4 Factors influencing disclosures in forecasts: content analysis

A content analysis of the disclosures in profit forecasts is made to assess whether the content varies with variables in the research..

3.4.1 Takeover-context variables (H_{20}-H_{21})

Party to the bid/forecaster

Previous research has shown the characteristics of bidders and targets to differ (Tzoannos and Samuels, 1972; Levine and Aaronovitch, 1981; Hasbrouck, 1985; Palepu, 1986; Barnes, 1990; Powell, 1995). Consequently, motivations for disclosure by bidders and targets during takeover bids may differ substantially. Consequently there may be differences in forecast disclosure content between these two groups.

Targets are expected to disclose more in their forecasts than bidders. Bidding companies control the timing of an approach and are more likely to make a bid when market conditions are favourable to the bidder. Bidders will therefore have less need to communicate with their shareholders. Target companies have no such control over events and therefore have a greater need to signal information to shareholders to adjust market expectations. In contested bids, the target company under attack by the bidder will have greater incentives to counter adverse comment from the bidder and publicity concerning the quality of its earnings. Advisors to target companies are more likely to be sued in the event of problems arising after a takeover. Consequently advisors will be

urging caution on directors of target companies and this more cautious, litigation-conscious approach may encourage extra disclosures in forecasts.

H_{20}: Content of disclosures in target company forecasts are greater than bidder forecasts.

Type of bid

Characteristics of target firms differ depending on whether they are the subject of contested or uncontested bids (Mørck, Shleifer and Vishney, 1988). The type of bid may also influence the propensity of firms to disclose information.

When a forecast is disclosed in a contested bid, invariably the forecast and its contents are attacked by the other side. Predators closely examine the basis of the profit forecast. Any short term device, such as reduced research and development spending or pension holidays, as well as creative accounting, will be highlighted to the target's discomfort. Examples 56 to 59 in appendix 4 illustrate this point. Consequently, additional disclosures are expected during contested bids to avoid attack by the other side and to underpin the reliability of the forecast.

The effect of competitive environments on disclosures in annual reports has been examined previously by Choi (1973). Choi found that firms competing for scarce capital upgraded and increased financial disclosure.

H_{21}: Content of disclosures in contested bid forecasts are greater than in agreed bid forecasts.

3.4.2 Forecast-related variables (H_{22}-H_{24})

Previous research recognises that some forecast-related characteristics influence accuracy. These forecast-related variables are also expected to have an effect on disclosures in forecasts.

Circumstances of making the forecast

Under the rules of the Takeover Code, any forecast or statement made before the commencement of the offer that could be construed as a forecast must be published in takeover documents and be formally reported on. Such forecasts are not made voluntarily (see examples 8 to 10 in appendix 4).

As the act of disclosing such forecasts is involuntary and reluctantly made by management, it is expected that the disclosures in these forecasts will also be made reluctantly, and consequently that there will be less disclosure in involuntary forecasts compared with voluntary forecasts.

H_{22}: Content of disclosures in voluntary forecasts are greater than in involuntary forecasts.

Forecast horizon and forecast period

The forecast horizon (days from the date of the forecast to the forecast period end date) and the period forecast (mostly six month forecasts or annual forecasts) are highly correlated and are therefore dealt with together. In particular, longer forecast horizons are related to longer period forecasts.

Forecast horizon and period forecast are expected to influence content of disclosures in forecasts for a number of reasons. Interim reports disclose considerably less detail than annual reports. Similarly interim (six month or shorter) profit forecasts are expected to disclose less information than annual forecasts.

Forecast horizon has been found to be an important determinant of forecast accuracy (Dev and Webb, 1972; Hagerman and Ruland, 1979; Brown, Foster and Noreen, 1985; Mak, 1989; Keasey and McGuinness, 1991). The interviews in chapter 5 suggest that forecasters attempt to deal with uncertainty in forecasts through disclosure of assumptions. The longer the forecast horizon and the longer the forecast period, the greater the uncertainty in the forecast. Therefore, greater disclosure (particularly of

assumptions) is expected to deal with the greater uncertainty inherent in long horizon, longer period forecasts.

H_{23}: Content of disclosures is greater in long horizon than in short horizon forecasts.

H_{24}: Content of disclosures is greater in longer period than in shorter period forecasts.

3.4.3 Firm-specific variables (H_{25}-H_{33})

Size of firm

Previous content analysis studies have suggested many reasons why large companies might disclose more information than other companies (Singhvi and Desai, 1971; Firth, 1979). Some of these reasons are outlined in paragraph 3.1.2 earlier in this chapter.

Cerf (1961), Singhvi and Desai (1971), Buzby (1974, 1975), Firth (1979), Chow and Wong-Boren (1987), Cooke (1989 and 1992) and Wallace, Naser and Mora (1994) have all documented that there is greater disclosure of financial accounting information by larger firms. Chow and Wong-Boren (1987) included size as a proxy for agency costs. Kahl and Belkaoui (1981) found size to be moderately significant in explaining the extent of bank reporting practices internationally. McNally, Eng and Hasseldine (1982) found size to be the only significant firm specific characteristic in relation to disclosure practices of New Zealand listed manufacturing companies.

H_{25}: Content of disclosures is greater in forecasts of larger compared with smaller firms.

Leverage

The reasons why leverage may be linked to voluntary disclosure have been outlined earlier in this chapter. Only Firth (1984) and Chow and Wong-Boren (1987) have tested leverage in a content analysis study of disclosure. Firth included leverage as a control variable in his study of amount of disclosure and stock market risk. Chow and

Wong-Boren test leverage for agency cost reasons. Neither study found the variable to be significant in explaining levels of voluntary disclosure.

H_{26}: Firms with high debt-equity ratios disclose more in their forecasts than firms with low debt-equity ratios.

Management ownership

No previous content analysis study has tested management ownership and level of disclosure. Reasons for a relationship between level of disclosure and management ownership are derived from agency theory outlined in connection with H_8 earlier in this chapter.

H_{27}: Firms with a lower percentage management ownership disclose more in their forecasts than firms with a higher percentage management ownership.

Substantial shareholdings

Firms with a larger proportion of share capital concentrated amongst a few large shareholders are likely to find disclosure of private information easier than firms with more dispersed shareholdings. This prediction applies not only to forecast disclosure but also to the details disclosed in the forecasts. The variable, percentage substantial shareholdings, attempts to measure the dispersion of shareholders in firms.

H_{28}: Firms with a larger percentage substantial shareholdings disclose less in their forecasts than firms with a smaller percentage substantial shareholdings.

Auditor/reporting accountant

The expectation of auditor influence on disclosure outlined earlier has generally not been found in previous content analysis studies. Firth (1979) found that choice of auditors had very little influence on the levels of disclosure made by companies. McNally, Eng and Hasseldine (1982) found no significant differences in disclosure for

big-eight audit firms compared with smaller audit firms. Following DeAngelo's (1981) finding that 'high quality' audit firms are likely to encourage clients to follow high quality reporting practices, it is hypothesised that there will be more disclosures in forecasts reported on by big-six auditors.

H_{29}: Firms engaging big-six auditors disclose more in their forecasts than firms with other auditors.

Financial advisor

Financial advisor is tested for a similar reason to auditor/reporting accountant. Financial advisors are also required to formally report on forecasts. In addition, the interview data suggest that financial advisors greatly influence disclosures in forecasts.

H_{30}: Firms engaging higher reputation financial advisors disclose more in their forecasts than firms with other financial advisors.

Listing status

Prior research has examined the influence of listing status on disclosures in annual reports with mixed results. Singhvi and Desai (1971), Firth (1979), Cooke (1989, 1992), Malone, Fries and Jones (1993) and Wallace, Naser and Mora (1994) found listing status to be significant, whereas Buzby (1975) did not. Cooke (1993) obtained mixed results. Meek and Gray (1989) found that quoted companies with a listing on more than one stock exchange disclosed more information than companies with a single listing. All target firms in this research are listed on the London Stock Exchange. However, bidders range from individuals, consortiums of individuals, private companies to foreign listed companies.

H_{31}: Bidders listed on the London Stock Exchange disclose more in their forecasts than unlisted bidders.

Industry

Industry is predicted to be related to disclosure for a number of reasons. Different industries have different proprietary costs of disclosure. Stanga (1976) found industry type to be a significant variable, whereas McNally, Eng and Hasseldine (1982) and Malone, Fries and Jones (1993) did not. Cooke (1992) found that manufacturing corporations in Japan disclosed significantly more information than non-manufacturing, regardless of quotation status. These studies indicate the need to control for industry. As the direction of the relationship between disclosure and industry is unknown, the hypothesis is expressed in null form.

H_{32}: Content of disclosures in forecasts are not related to the industry of the forecasting firm.

Nationality

All targets are listed on the London Stock Exchange and are either UK or Irish companies. Many of the bidders are foreign. Consequently the sample of firms is made up of a mixture of nationalities. Variation in the level of disclosures in annual reports of different nationality firms has been well documented (Gray, 1978; Kahl and Belkaoui, 1981; Gray, Meek and Roberts, 1993). A dummy variable is included to control for the effect of nationality. Again the direction of the relationship is unknown so the hypothesis is expressed in null form.

H_{33}: Content of disclosures in forecasts is no different for UK firms than for other nationality firms.

In summary, it is hypothesised that content of disclosures in profit forecasts is a function of the various explanatory variables described above, as shown in table 3.2.

3.5 Factors influencing disclosures in forecasts: news content (H_{34})

Signalling theory suggests that firms are motivated to signal good news and are more likely to disclose a forecast. The empirical evidence of the role of good news in

motivating forecast disclosure is mixed and seems to depend on the time period of the study and on the type of forecasts studied (point or narrow range forecasts versus more qualitative forecasts). Patell (1976), Penman (1980), Waymire (1984) and Lev and Penman (1990) find that earnings forecasts are in general associated with positive returns and that firms with good news appear more willing to reveal their forecasts. Results are based on average figures and a number of bad news forecasts were found in the samples.

Table 3.2 Model of content of disclosures in profit forecasts

Disclosures = f (BT + BID + CIRC + FHOR + PER + SIZE + LEV + MO + SSH + AUD + MB + QUOTED + IND + NAT)

where:

BT	= Forecaster	MO	= Management ownership of firm
BID	= Type of bid	SSH	= Substantial shareholdings in firm
CIRC	= Circumstances of the forecast	AUD	= Auditor/reporting accountant
FHOR	= Forecast horizon	MB	= Financial advisor
PER	= Period of the forecast	QUOTED	= Whether quoted on London S/E
SIZE	= Size	IND	= Industry sector of firm
LEV	= Leverage	NAT	= Nationality of firm

Ajinkya and Gift (1984), Waymire (1984) and Ruland, Tung and George (1990) did not observe an overall tendency to report good news. They show that incentives exist for management to disclose both good and bad news. Baginski, Hassell and Waymire (1994), Pownall, Wasley and Waymire (1993) and Skinner (1994) provide evidence that firms are more likely to disclose bad news than good news. Clarkson, Dontoh, Richardson and Sefcik (1992) and Clarkson, Kao and Richardson (1994) found that the mean value of the good news measure for Canadian forecasters significantly exceeded nonforecasters. As the weight of evidence supports the disclosure of good news, it is hypothesised that more good news than bad news forecasts will be disclosed.

H_{34}: Forecasts disclosed are mainly good news forecasts.

3.6 Summary and conclusions

This chapter developed 34 hypotheses for testing. As agency theory and signalling theory are the primary theoretical background to the study, they provide the basis for some of the hypotheses tested. The situation specific nature of the research gave rise to a number of hypotheses testing the effect of takeover-context on disclosure. Prior empirical voluntary disclosure research suggested additional control variables.

Table 3.3 summarises the 34 hypotheses under the five research headings identified at the beginning of this chapter. There may seem to be a large number of hypotheses, but many are repetitive as there are two primary dependent variables: disclosure/nondisclosure of forecasts (H_1-H_{14}) and content of disclosures in forecasts (H_{20}-H_{33}). Thus, there is considerable duplication in these two groups of hypotheses.

Chapter 4 describes the research methodology applied to test these hypotheses, and how the dependent and independent variables were measured. Results of analysis of H_1-H_{19} are reported in chapter 6. Results of analysis of content of disclosures in forecasts and news content in forecasts (H_{20}-H_{34}) are reported in chapter 7.

Table 3.3 Summary of hypotheses

Research issue	Hypotheses	Dependent variable
Factors influencing disclosures of forecasts	H_1-H_{14}	Disclosure/nondisclosure of a forecast
Influence of market expectations	H_{15}	Disclosure/nondisclosure of a forecast
Forecast effective weapon?	H_{16}-H_{19}	Success/failure of bid Offer price increased/not increased
Factors influencing content of disclosures in forecasts	H_{20}-H_{33}	Content of disclosures in forecasts: No. of items and assumptions disclosed
News content of forecasts	H_{34}	Good news/bad news

Chapter 4: RESEARCH METHODOLOGY

This chapter describes population and sample, data collection methods, definition and measurement of the variables and the statistical techniques used to examine influences on disclosure of profit forecasts and on content of disclosures in the forecasts.

4.1 Population and selection of sample

The sample chosen for study covers all takeover bids for companies listed on the London Stock Exchange during the period 1988 to 1992. A relatively long period of study is necessary to ensure that the sample contains enough profit forecasts to provide sufficient data to ensure meaningful statistical analysis. At the commencement of the research, it was expected that a profit forecast would be disclosed in approximately 20% of takeover bids.

In addition, by choosing such a long experimental period, an analysis of the effect of economic conditions on disclosure can be undertaken. There were considerable differences in economic conditions prevailing, and in the level of takeover activity, during this five year period. Takeover activity was particularly high in 1988 and 1989, falling off in 1990, to very low levels in 1991 and especially in 1992.

Table 4.1 Summary economic indicators 1988 to 1992

	1988	1989	1990	1991	1992
GDP (1990=100)	97.3	99.4	100	97.9	97.4
Volume of retail sales (1990=100)	97.3	99.3	100	98.9	99.5
UK unemployment	2.4m	1.9m	1.5m	1.8m	2.5m
Share prices FT-SE Actuaries: '500' shares (1985 FT=100)	147	177	173	190	199
Interest rates (LIBOR) (End of year % p.a.)	13.0	15.0	14.0	10.5	7.0

Sources: *Annual abstract of statistics 1995*. Central Statistics Office: HMSO: London.
Main economic indicators. January 1993 and April 1994. Statistics Directorate, OECD.

Some economic indicators for the period are shown in table 4.1. These show 1990 to have been a buoyant year economically. Lower share prices in 1988 (particularly), 1989 and 1990 would be a factor in the high level of takeover activity in these three years. Equally, the very high share prices in 1991 and 1992 would be related to the very low level of takeover activity in these years, especially in 1992.

Acquisitions Monthly was used to obtain a list of all public company takeovers in the UK over the five year period of the study. The January edition of the journal publishes a summary of all UK public company takeovers completed and failed for the previous year. This includes takeovers of UK and Irish public companies by other UK and Irish public companies, by unlisted UK companies and by listed and unlisted foreign companies.

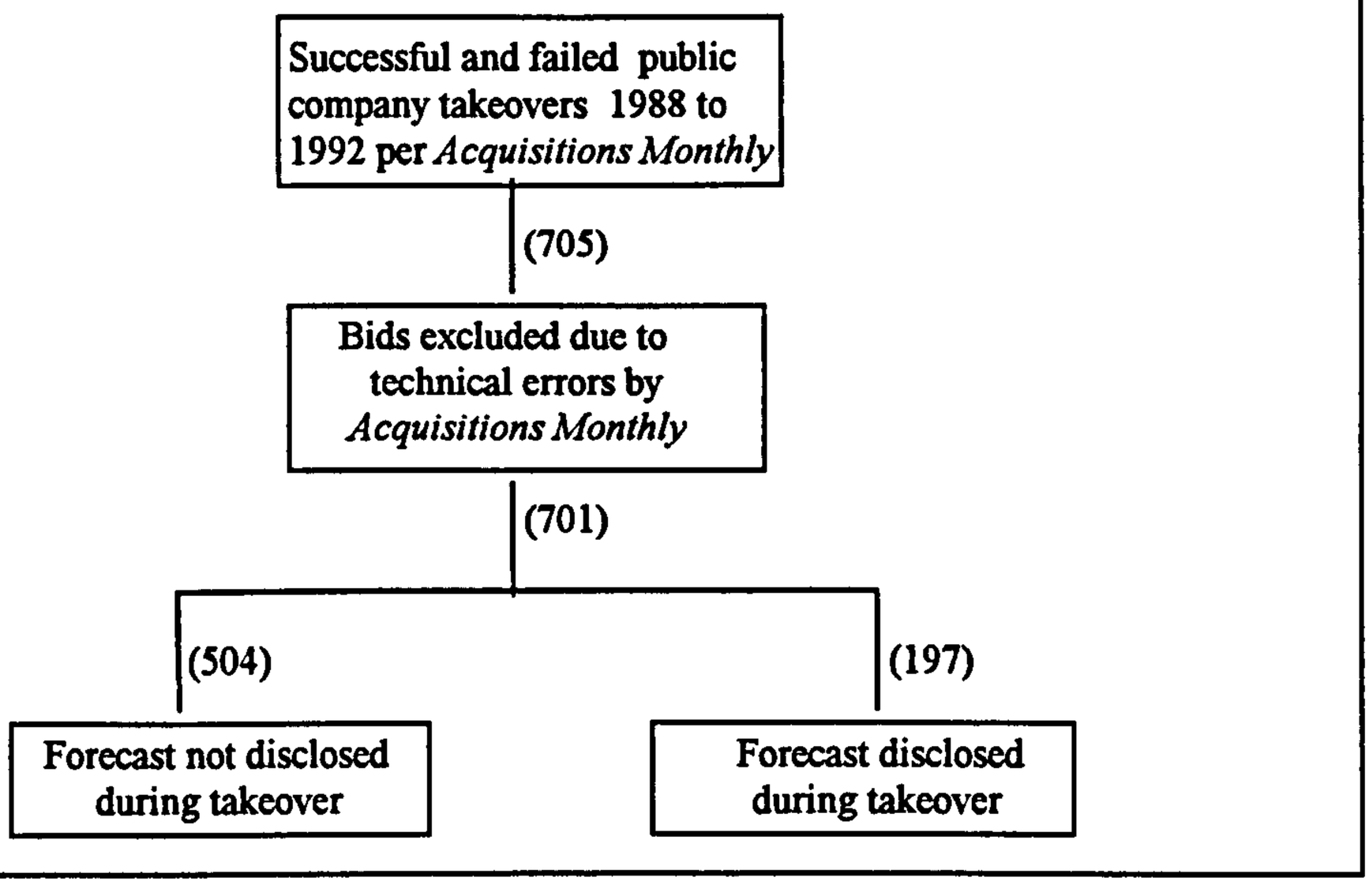
4.1.1 Sample

In total, 705 completed and failed bids were listed for 1988 to 1992. Four bids listed have been excluded from the research (reference numbers 7-1990, 125-1990, 91-1991 and 29-1992 in appendix 5). Two bids, occurring in late December, were included twice in two different years by *Acquisitions Monthly.* In one further case, the target had previously been taken over by a public company and was therefore a private company at the date of the second bid. No takeover documents were publicly available for this bid. The fourth bid excluded, although reported by *Acquisitions Monthly,* did not take place (this was confirmed in a telephone conversation with the bidder - an individual).

This study of forecast disclosure is unique in that it includes the full population of 701 bids (involving 1,402 bidders and targets). No bids, bidders or targets have been excluded from the study other than those mentioned in the previous paragraph which are not properly part of the population.

Figure 4.1 summarises the sample details.

Figure 4.1 Sample identification



Takeover bids are analysed by type in tables 4.2 and 4.3. There were 528 agreed bids, 158 contested bids and 15 white knight bids. For the ensuing analysis, the 15 white knight bids are categorised as agreed bids. Of the 158 contested bids, 80 failed (51%). There were also 41 agreed bids which were not completed, resulting in a total of 121 failed bids in the study. The main reason why agreed bids did not complete is competing bids from other bidders (23 of the 41 agreed uncompleted bids were the subject of alternative bids).

Table 4.4 shows that there was little change in trend in the proportion of defended takeover bids during the period. As publication of a profit forecast is one means of defending a takeover, any change in the defence ratio would be expected to affect the number of profit forecasts disclosed in a period.

Table 4.2 Analysis of UK listed company takeovers 1988 to 1992

	1988	1989	1990	1991	1992	Total
Completed bids						
Agreed bid	135	123	107	76	48	489
Contested bid	23	21	13	14	8	79
White knight	0	7	3	-	2	12
	158	151	123	90	58	580
Failed bids						
Agreed bid	11	10	3	10	4	38
Contested bid	22	24	14	14	6	80
White knight	-	2	-	1	-	3
	33	36	17	25	10	121
Total bids	191	187	140	115	68	701

Table 4.3 Analysis of success or failure of bids by targets' initial response

	Agreed	Contested	White knight	Total
Completed bids	489 (93%)	79 (50%)	12 (80%)	580 (83%)
Failed bids	38 (7%)	80 (50%)	3 (20%)	121 (17%)
	527 (100%)	159 (100%)	15 (100%)	701 (100%)

Table 4.4 Incidence of defended takeover bids

Year	Bids	Defended bids	Defended ratio
1988	191	45	24%
1989	187	45	24%
1990	140	27	19%
1991	115	28	24%
1992	68	14	21%
	701	159	23%

The purchase consideration ranged between cash, paper and various combinations of cash and paper. Table 4.5 shows that nearly half were cash bids, with the remainder fairly evenly divided between paper or a mixture of cash and paper bids.

Table 4.5 Bids analysed by purchase consideration	
Cash	338 (49%)
Paper	192 (28%)
Cash and paper	163 (23%)
	693 (100%)
Missing values	8
	701

Table 4.6 summarises some characteristics of bidders and targets. The majority are advised by higher reputation financial advisors and auditors. All target firms, and a majority of bidders, are UK quoted companies. A good spread of industries is represented in the population. The majority of firms are UK firms, with a small pocket of Irish firms and a substantial group of foreign companies. There are a large number of missing values on the variables, financial advisor and industry.

4.1.2 Data collection

Forecasts were obtained from an examination of the takeover documents for the entire sample of 701 bids. These were obtained from three sources. Extel Financial's microfiche service contains microfiche copies of all documents issued by companies quoted on the London Stock Exchange. Takeover documents are available on the C fiche service. This service was made available by KPMG Peat Marwick, London. Subsequently, Extel Financial allowed access to their hard copy and microfiche files to obtain documents not available in KPMG Peat Marwick. Finally, any remaining missing documents were obtained by writing directly to bidders, targets or their financial advisors.

4.1.3 Frequency of forecast disclosure

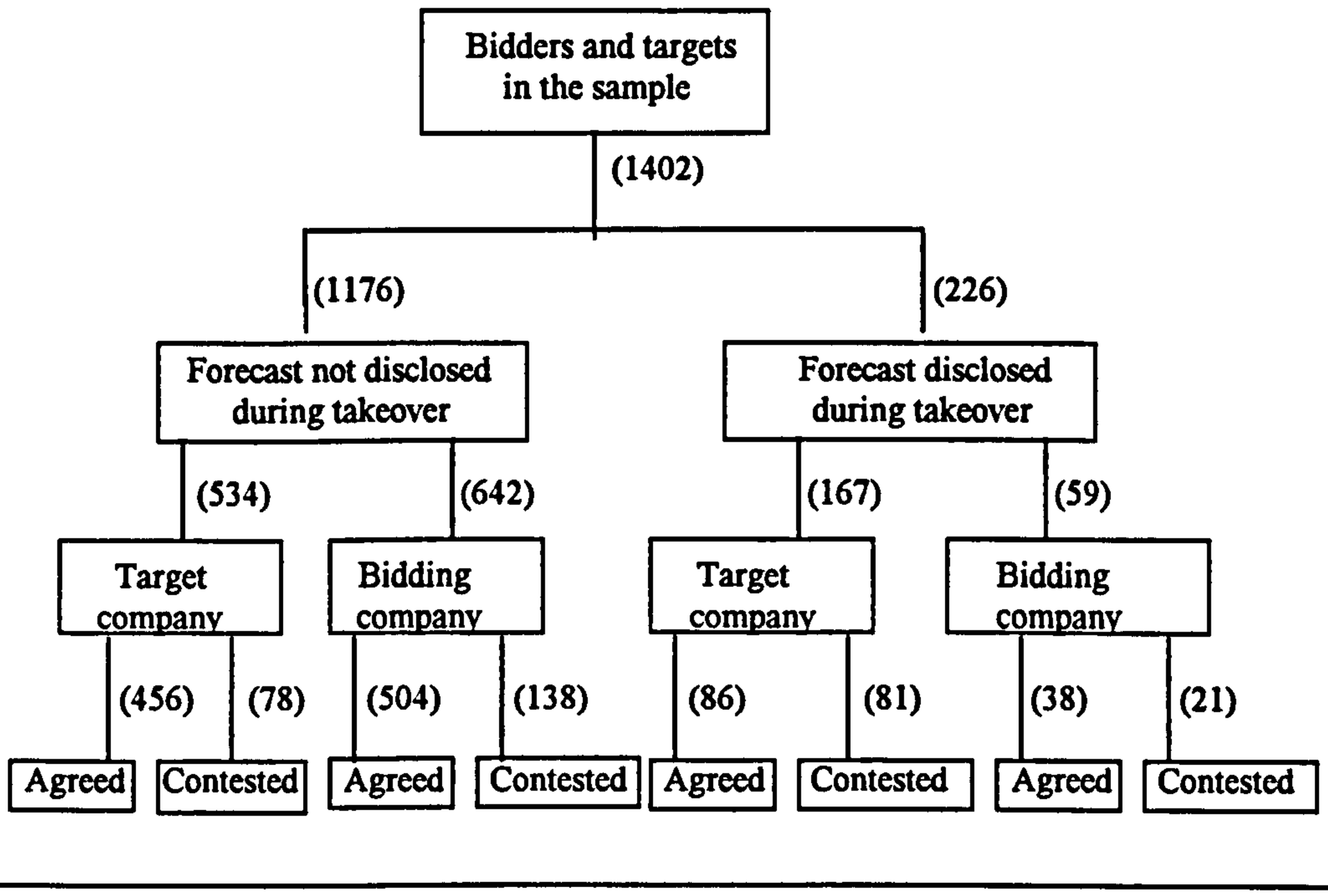
Frequency of forecast disclosure is shown in figures 4.1. and 4.2. Figure 4.1 shows that a forecast was disclosed in 197 out of 701 bids: a frequency of one forecast in every 3.5 bids. Figure 4.2 shows that 226 firms, out of 1,402, disclosed a forecast: a frequency of one forecast for every six firms.

Table 4.6 Categorical firm-specific variables

	Total
Auditor/reporting accountant	
Big-six auditors	716 (69%)
Other auditors	317 (31%)
	1033 (100%)
Missing values	369
	1402
Financial advisor	
Higher reputation financial advisors	848 (62%)
Other financial advisors	520 (38%)
	1368 (100%)
Missing values	34
	1402
Listing status	
Quoted	1032 (74%)
Unquoted	370 (26%)
	1402 (100%)
Industry	
Capital goods	216 (22%)
Durable goods	131 (14%)
Non-durable goods	260 (27%)
Banks and financial	147 (15%)
Other	214 (22%)
	968 (100%)
Missing values	434
	1402
Nationality	
UK companies	1192 (85%)
Irish companies	27 (2%)
Other nationalities	183 (13%)
	1402 (100%)

More than one forecast was disclosed in some bids. There was a forecast disclosure frequency of almost one forecast in every three bids (250 forecasts in 701 bids). Westwick (1972) found a similar frequency of disclosure. He reports figures from the Takeover Panel annual reports for the years ending 31 March 1970 (363 bids) and 1971 (296 bids) in which 245 forecasts were disclosed. These figures would suggest an average of at least one forecast in every three bids - similar to this study. Gray, Roberts and Gordon (1991) in MCRV found a smaller proportion of forecasts: 11 from 52 takeover documents (21%).

Figure 4.2 Frequency of forecast disclosure



The frequency of disclosure in prospectuses issued in other business situations has been higher. Ferris (1976) found 58% new issue prospectuses disclosed forecasts. More recently, Keasey and McGuinness (1991) found 121 forecasts (62%) in 194 prospectuses issued in connection with placement flotations in the unlisted securities marked in the UK between 1984 and 1986.

In a three year study, Platt (1979) found that 39% and 34% of annual reports disclosed a profit forecast in 1973/74 and 1974/75 but none was disclosed in 1975/76 due, he conjectured, to adverse political and economic conditions. In addition, Platt found between 62% and 72% of interim reports disclosed a profit forecast.

Frequency of forecast disclosure also varies with jurisdiction. Clarkson, Dontoh, Richardson and Sefcik (1992) found that 58% initial public offering prospectuses on the Toronto Stock Exchange in the period 1984 to 1987 voluntarily included an earnings forecast. Meek and Gray (1989) were surprised to find six out of 14

Swedish firms in their study disclosing a quantitative forecast. Dutch firms gave vague indications of future financial information, while French and German firms in the study disclosed no forward-looking information.

In all, 250 forecasts were disclosed. Table 4.7 analyses forecast disclosure by year. As the level of takeover activity was greatest in the late 1980s compared with the early 1990s, there were more forecasts in the earlier years of the study, particularly in 1988. The economic conditions prevailing in 1988, as shown in table 4.1, do not appear to account for the higher incidence of forecasts in that year, nor does the level of contested bids. The incidence of contested bids in 1988 (shown in table 4.4) is not very different from other years in the study.

Table 4.7 Year of forecast

	Forecasts	Bids	%Forecasts/Bids
1988	82 (33%)	191 (27%)	43%
1989	60 (24%)	187 (27%)	32%
1990	52 (21%)	140 (20%)	37%
1991	32 (13%)	115 (16%)	28%
1992	24 (9%)	68 (9%)	35%
	250 (100%)	701 (100%)	

4.2 Research methodology

Research methodology is dealt with under five headings, derived from the five research issues outlined in chapter 1.

4.2.1 Factors influencing disclosure

4.2.1.1. Interviews

In order to understand the disclosure process better and to validate the research hypotheses and design against the practice and opinions of those involved in the disclosure decision, eleven participants in the disclosure decision were interviewed. These interviews are analysed in chapter 5 and are reported in detail in appendix 2. Selection of interviewees is described in chapter 5.

Interview method

There are three basic approaches to collecting data through interview ranging from informal conversational to interview guide approach to standardised open-ended interview (Patton, 1990). This research followed a semi-structured approach whereby an outline interview guide (shown in appendix 1) was sent to each interviewee in advance of the interviews. This gave interviewees some advance notice of interview questions and also provided the interviews with a framework and focus. The interview outline was used to ensure that the interviewee described in detail the unfolding of the disclosure process during the bid. This ensured that the research issues addressed by the hypotheses were discussed. Otherwise the interviews developed in response to the answers given by the interviewees to the questions. Generally during interview this outline was expanded on in the course of the discussion.

Each interview lasted one and a half to two hours. In one case there was a follow up interview. Interviews were recorded in note form or on tape.

4.2.1.2 Quantitative analysis: measurement of variables

Variables are summarised in table 4.8 (except for forecast-related variables which are shown in table 4.18).

4.2.1.3 Dependent variable - forecast disclosure/nondisclosure

The primary dependent variable is forecast disclosure (F). All takeover documents were examined for disclosure of a forecast. The variable is a dummy variable with the value 0 for nondisclosure, or for disclosure of an involuntary/repeat forecast, and 1 where one or more forecasts are disclosed voluntarily.

4.2.1.4 Independent variables

There are three levels of independent variable. Takeover-context variables are first described, followed by firm-specific variables. Forecast-related independent variables are dealt with in section 4.2.4.2.

Table 4.8 Definition and measurement of variables

Dependent variables

- Forecast (F): 1 = Voluntary forecast, 0 = No voluntary forecast
- Success of bid (SUC): 1 = Successful bid, 0 = Failed bid
- Increase in offer (I.OFFER): 1 = Offer increased 0 = No increase

Independent variables

Takeover-context variables

- Economic conditions (YEAR): By year
- Party to the bid (BT): Bidder = 0, Target = 1
- Type of bid (BID): 0 = Agreed bid, 1 = Contested bid
- Bid horizon (BHOR): Measured in days from date of the bid to the following year end
- Purchase consideration (CON): 1 = Cash, 2 = Paper, 3 = Cash and paper
- Size (VAL): Value of the bid

Firm-specific variables

- Size (REV): Turnover of bidder/target from the most recent accounts prior to the bid
- Size (TA1): Total assets of bidder/target
- Size (TA2): Owners' equity of bidder/target
- Leverage (LEV): Long term debt + Total assets of bidder/target
- % Management Ownership (MO): Management voting shares + Total voting shares
- % Substantial shareholdings (SSH): Total % equity of the company held by substantial (>5%) shareholders
- Number of substantial shareholdings (NO.SSH): Number of substantial (>5%) shareholders
- Auditor/reporting accountant (AUD): 1= Big-six auditors, 0 = Others
- Financial advisor (MB): 1 = Higher reputation, 0 = Other
- Listing status (QUOTED): 0 = Unquoted, 1 = Quoted
- Industry sector (IND): 1 = capital goods, 2 = consumer durable goods, 3 = consumer non-durable goods, 4 = other, 5 = banks and financial
- Nationality (NAT): 0 = UK, 1= Irish, 2 = Other
- Deviation from market expectations (ME): Difference between consensus analysts' forecasts and subsequent actual results

Takeover-context variables

There are six bid-related variables: year, party to the bid, type of bid, value of bid, bid horizon and purchase consideration. Year of the bid (YEAR) is a proxy for economic conditions. Party to the bid (BT) is either the bidder or target, coded 0 and 1 respectively. Type of bid (BID) is given a value of 0 for agreed bids and 1 for contested bids. As there were so few white knight bids, they are classified as agreed bids. Value of the bid (VAL), which is in £millions, proxies for firm size. Bid horizon (BHOR) is measured in days from the date of the bid to the year end for which accounts have not been published. Acquisitions Monthly discloses the date of the most recent published accounts. For the purpose of logit analysis this

variable is scaled by the number of days in the year (365). Purchase consideration (CON) offered during the bid is coded 1 for cash, 2 for paper and 3 for various combinations of cash and paper. Data on all these variables were obtained from *Acquisitions Monthly* or from the takeover documents.

Firm-specific variables

In all, there are ten firm-specific variables: size, leverage, percentage management ownership, substantial shareholders, auditor/reporting accountant, financial advisor, listing status, industry, nationality and deviation from market expectations.

Three proxies for size (in addition to value of the bid (VAL)) are used: turnover (REV), total assets (TA1) and owners' equity (TA2), all measured in £thousands (logit analysis) or £millions (in negative binomial regression analysis). Statistical analysis is run separately on these variables in all analyses.

Amounts were extracted from the most recent full set of accounts in each takeover document. Total assets (TA1) is taken as fixed assets plus net current assets. Owners' equity (TA2) is total assets less all liabilities. In some cases, particularly financial institutions, total assets could not be calculated from the balance sheet as current liabilities and long term liabilities are not disclosed separately.

Leverage (LEV) is based on the latest balance sheet amounts in the takeover documents and is calculated as long term debt divided by total assets.

Foreign currency amounts for the above variables are translated at the rates ruling on balance sheet dates. Monthly foreign exchange rates were obtained from *Datastream*.

Percentage management ownership (MO) is taken from *Crawford's Directory of City Connections* and is the percentage of ordinary shares held by members of the

board, their families and associates. *Crawford's Directory* is an annual publication. The directory for the same year as the bid was consulted. Where this information is not available in *Crawford's Directory*, beneficial interests of the directors and their families, as disclosed in the takeover documents, are used. Where the bidder is an individual, a consortium of individuals or a family company, percentage management ownership (MO) is recorded as 100 per cent.

Substantial shareholdings is measured in two ways: number of substantial shareholders (NO.SSH): those holding 5% or more of the company, and percentage substantial shareholdings (SSH): the percentage equity of the company held by substantial (>5%) shareholders. This information is also obtained from *Crawford's Directory.*

Auditor/reporting accountant (AUD), a dummy variable, is recorded as 1 for big-six auditors and 0 for other firms. Big-six firms are: KPMG Peat Marwick; Price Waterhouse; Arthur Andersen; Coopers & Lybrand Deloitte; Ernst & Young; Touche Ross (including their predecessors). Information on company auditors was obtained from *Crawford's Directory* and from forecasts where these were disclosed.

Financial advisor (MB) is also a dummy variable with a value of 1 for higher reputation merchant banks and 0 for other firms. Higher reputation merchant banks were taken to be top 15 firms of advisors listed in *Acquisitions Monthly*'s eight year league table of financial advisors on UK public company takeovers in the period 1985 to 1992 (*Acquisitions Monthly*, February 1993).

Listing status (QUOTED) is a dummy variable with the value 0 for companies not quoted on the London Stock Exchange and 1 for quoted companies.

Industry codes (IND) are obtained from *Crawford's Directory.* Crawford's industry index is based on categories used by the *Financial Times* and used by the FT-Actuaries All-Share Index. These were re-coded to 1 for capital goods, 2 for

consumer-durable goods, 3 for consumer non-durable goods, 4 for other and 5 for banks and financial.

Nationality of bidder/target (NAT) is available from *Acquisitions Monthly*. There were 26 nationalities in the sample. These were re-coded 0 for UK, 1 for Irish and 2 for other nationalities.

4.2.1.5 Predicted response of forecast disclosure/nondisclosure variable to independent variables

Table 4.9 summarises the predicted response of the primary dependent variable, disclosure of a forecast, to each independent variable (H_1-H_{14}).

Table 4.9 Prediction of impact of independent variables on disclosure of forecasts

Independent variable	Impact on disclosure
<u>Takeover-context variables</u>	
YEAR	? More changeable economic conditions make forecasting difficult. There will be fewer forecasts in recessionary periods
BT	B? Targets are more likely to disclose forecasts than bidders T+
BID	+ Contested bids will have a positive effect on disclosure
BHOR	- The longer the bid horizon the greater the uncertainty and the less likely forecasts will be disclosed
CON	B+ Bidders are more likely to disclose forecasts during a paper bid T? Purchase consideration will not have an effect on disclosure of forecasts by targets
<u>Firm-specific variables</u>	
VAL/REV/TA1/TA2	+ Larger firms are more likely to disclose forecasts
LEV	+ Higher leverage results in higher agency costs and therefore greater disclosure of forecasts
MO	- Lower management ownership results in higher agency costs and consequently greater disclosure of forecasts
SSH/NO.SSH	- Substantial shareholders can be informed privately
AUD	+ Better quality auditors are more likely to encourage disclosure of forecasts
MB	+ Better quality financial advisors are more likely to encourage disclosure of forecasts
QUOTED	B+ UK listed bidders are more likely to disclose forecasts
IND	?
NAT	?

4.2.1.6 Summary descriptive statistics - independent variables

Summary descriptive statistics for all continuous variables are shown in Table 4.10. The mean of bid horizon (BHOR) is 118 days from the date of the bid to the following year end date. This variable is only slightly negatively skewed. The size variables, value of bid (VAL), turnover (REV), total assets (TA1) and owners' equity (TA2), are highly positively skewed. Leverage (LEV) is also positively skewed, as are, to a lesser extent, percentage management ownership (MO), number of substantial shareholders (NO.SSH) and percentage substantial shareholdings (SSH).

Missing values are a problem with some variables, especially number of shareholders (NO.SSH) and percentage substantial shareholdings (SSH) which are missing in 53% and 47% of cases. Percentage management ownership (MO) is missing in 20% and bid horizon (BHOR) in 19% of cases. Missing values are particularly a problem with bidders as these include individuals, consortiums, private companies and foreign companies.

Table 4.10 Descriptive statistics of continuous independent variables

Variable	Mean	Median	Skewness	Standard deviation	No.	Missing values	Total
Takeover-context variables							
BHOR	118	117	-0.26	117	571	130 (19%)	701
VAL	169	25	12.92[1]	666	698	3 (0.4%)	701
Firm-specific variables							
REV	745	56	11.69[1]	3275	1210	192 (14%)	1402
TA1	372	29	24.36[1]	2238	1204	198 (14%)	1402
TA2	302	23	31.15[1]	2801	1260	142 (10%)	1402
LEV	0.37	0.21	12.37[1]	1.42	1201	201 (14%)	1402
MO	25.36	11.55	1.22[1]	30.82	1127	275 (20%)	1402
NO.SSH	2.06	2.00	0.96[1]	1.15	661	741 (53%)	1402
SSH	0.35	0.26	1.13[1]	0.29	739	663 (47%)	1402

[1] These values (compared with values given in tables by Kanji (1993)) would indicate that assumptions that the variables are distributed normally are inappropriate.

Spearman bivariate correlations for all independent variables were calculated separately for bidders and targets and are shown in tables A3.3 and A3.4 in

appendix 3. The highest correlations (down to 0.40) are summarised in table 4.11 - the top six relate to correlations between the four size variables. There are also high correlations between the size variables and management ownership, between the size variables and financial advisors (for targets only), and among the dummy variables for purchase consideration.

Thus, except for the size variables, there are few highly correlated independent variables in the sample. In any event, high correlations between the independent variables are not a problem for the multivariate statistical technique (logit analysis) used to analyse disclosure/nondisclosure of forecasts.

Table 4.11 Summary of highest bivariate Spearman correlations between independent variables

	Correlation	
Relationship	**Bidders**	**Targets**
TA1-TA2	0.96**	0.98**
REV-TA1	0.76**	0.70**
REV-TA2	0.71**	0.68**
VAL-REV	0.45**	0.73**
VAL-TA1	0.53**	0.82**
VAL-TA2	0.52**	0.81**
DCASH-DMIXED	0.45**	0.45**
DPAPER-DMIXED	0.52**	0.52**
MO-VAL	-0.40**	-0.40**
MO-REV	-0.49**	
MO-TA1	-0.59**	-0.47**
MO-TA2	-0.60**	-0.48**
MO-SSH	0.61**	
MB-VAL		0.48**
MB-REV		0.47**
MB-TA1		0.49**
MB-TA2		0.49**
QUOTED-DPAPER	0.43**	
QUOTED-MO	-0.42**	
QUOTED-SSH	-0.78**	
DNAT-REV	0.40**	
DNAT-QUOTED	-0.50**	

** Significant at < 0.01

Full statistical output for this table is shown in tables A3.3 and A3.4 in appendix 3.

4.2.2 Factors influencing disclosure of forecasts: market expectations

4.2.2.1 Measurement of market expectations

Deviation from market expectations (ME) measures the difference between subsequent actual profit before taxation and consensus analysts' forecast of profit before taxation for the year. Consensus analysts' forecasts are taken from *The Earnings Guide.* This is a monthly publication; the data are extracted from the issue closest to and prior to the bid date. Subsequent actual results are also obtained from *The Earnings Guide.* The variable is scaled as follows:

$$ME = \frac{\text{Consensus analysts' forecast - Actual results}}{\text{Actual results}}$$

Only 261 readings are available for deviation from market expectations (ME). This is for two reasons: (i) the coverage of *The Earnings Guide* is limited to UK publicly quoted companies widely followed by analysts; (ii) subsequent results for many target firms in the study were unavailable because the target had been taken over and its results were included in the overall results of the bidder.

Coverage of target companies by *The Earnings Guide* is not as good as for bidders - probably because targets are on average smaller and may be not as important to follow.

Deviation from market expectations is analysed between positive (POSME) and negative (NEGME) deviations. A positive deviation is one that is greater than zero; a negative deviation is less than or equal to zero.

Table 4.12 Prediction of impact of market expectations on disclosure of forecasts

Independent variable	Impact on disclosure	
ME	+	The more out of line actual results are with expectations, the more likely a forecast will be disclosed

4.2.2.2 Predicted response of forecast disclosure/nondisclosure variable to market expectations

Table 4.12 summarises the predicted response of the dependent variable, disclosure of a forecast, to market expectations (H_{15}).

4.2.2.3 Summary descriptive statistics - market expectations

Descriptive statistics for market expectations are shown in table 4.13. The positive and negative subsamples are also analysed. The means for positive (POSME) and negative (NEGME) deviations do not appear dissimilar. The value of deviation from market expectations (ME) is not very different from zero.

Skewness statistics indicate that none of the variables is distributed normally and consequently nonparametric methods are used in analysing market expectations in chapter 6.

Table 4.13 Descriptive statistics of market expectations variables

Variable	Mean	Median	Skewness[1]	Standard deviation	No.	Missing values	Total
ME	0.03	0.02	1.37	0.73	261	1141(81%)	1402
POSME	0.26	0.09	5.78	0.68	153		
NEGME	-0.31	-0.11	-4.32	0.67	108		

[1] Coefficients are all outside the range specified in Kanji (1993) for the variables to be considered normally distributed.

4.2.3 Defensive role of profit forecasts

4.2.3.1 Measurement of dependent variables - outcome of bids

Outcome of bids is published by *Acquisitions Monthly* and is measured in two ways. Success of bid (SUC) is a dummy variable with the value 1 for successful bids and 0 for failed bids. Increase in offer (I.OFFER) is also a dummy variable with the value 1 where there has been an increase and 0 for no increase. Whether or not there was an increase in the offer was obtained from *Acquisitions Monthly* and from whether increased offer documents were issued.

4.2.3.2 Predicted response of outcome of bids dependent variables to forecast disclosure/nondisclosure

The predicted effect of disclosure of a forecast on outcome of bids is summarised in table 4.14 (H_{16}-H_{19}).

Table 4.14 Prediction of impact of forecast disclosure/nondisclosure on outcome of bids

Independent variable	Impact on outcome of bid
F	T+ Disclosure of forecasts will result in more bids being successfully defended by targets and in higher offer prices for targets B+ Disclosure of forecasts will result in more bids being successfully completed by bidders and will not affect the price being offered

4.2.4 Factors influencing disclosures in forecasts: content

4.2.4.1 Content analysis of disclosures in forecasts

A comprehensive content analysis of all forecasts (whether voluntary or involuntary/repeat forecasts) was carried out. Wording used in forecasts, their presentation, location in takeover documents and the circumstances of making the forecast were analysed, as were the period forecast, quantification in the forecast, and the forecast horizon. Examples from forecasts to illustrate issues raised by the research are shown in appendix 4.

Disclosures in the forecasts are measured using a counting method. Statistical problems arising from using a counting approach are addressed later in this chapter.

<u>Counting method</u>

Previous research has measured the quantity of disclosure using a disclosure index (see Marston and Shrives (1991) for a review article). Courtis (1992) questions the reliability of results generated from the use of such instruments. Marston and Shrives state that '*The validity of disclosure indices as a measure of information disclosure cannot be accepted without question. However, no other method for measuring disclosure has been developed.*' Ball and Foster (1982) comment that

the '*more disclosure the better*' framework appears to guide this kind of research, and superior disclosure is operationalised as a higher index score.

All previous research using disclosure indices applied them to disclosures in annual reports. In these studies it is possible to specify an upper disclosure limit based on mandatory disclosures and on expected voluntary disclosures. Problems arise in constructing a disclosure index for disclosures in forecasts. Firstly, it is more difficult to select a list of items that should be disclosed in forecasts as there are few legal, regulatory or professional guidelines as to what should be disclosed. Secondly, in addition to disclosing financial information about firms' results, forecasts will contain assumptions which, on the one hand, provide more information on how the forecast is arrived at, but, on the other hand, may qualify the certainty of achieving the forecast. For these reasons, a counting approach is used to measure disclosure. Regression methods suitable for count data are applied to analyse the results.

It was apparent from the interviews that motivations for disclosure of financial items in profit forecasts differ greatly from those influencing disclosure of assumptions. Assumptions are chosen to give the best results for the company and act as caveats to forecasts. They therefore introduce doubt. Consequently, disclosures are measured by two variables: number of items (ITEMS) and number of assumptions (ASS) disclosed in forecasts.

All items and assumptions disclosed were examined and counted. Each item disclosed counted for a value of one, except for subtotals generated which were generally ignored. A dividend forecast counted for one even when it was not included in the forecast (dividend forecasts are rarely reported on by accountants). Notes amplifying disclosure in forecasts were counted as one (even if the note disclosed more than one item). Thus, earnings per share in forecasts counted as one and notes describing earnings per share calculations also counted as one. A similar approach was used for counting assumptions.

It is not possible to take account of whether nondisclosure of items or assumptions arises because they are not relevant to firms (e.g. where no interest charge is disclosed because the firm does not have borrowings). Most disclosure studies suffer to some extent from this limitation, although many attempt to identify whether or not particular disclosure items are applicable to firms. This would be very difficult in the context of the non-standard and entirely voluntary nature of content of disclosures in profit forecasts.

Disclosures were given equal weightings, which assumes each item of disclosure is equally important. In practice, users may attach different importance weightings to items disclosed. However, estimating these subjective weightings is methodologically difficult. Results of user surveys are unreliable and depend on individual user group preferences, which may change over time (Dhaliwal, 1980). In this research, a user survey (on which the weightings would have been based) would have been carried out some time after the forecasts were published. Another criticism of user surveys is that attaching weights does not result in real economic consequences for those whose opinions are surveyed (Chow and Wong-Boren, 1987).

Marston and Shrives (1991) quote Spero (1979) as reporting that attaching weightings to disclosure scores is irrelevant, as firms that are better at disclosing '*important items*' are also better at disclosing '*less important items*'. Adding support to this conclusion, Firth's (1980) results were similar, using both weighted and unweighted disclosure scores. Robbins and Austin (1986) and Chow and Wong-Boren (1987) provide additional evidence that there may be no significant difference between weighted and unweighted disclosure indices.

The example below illustrates the approach used and the way in which assessing the forecasts involves some subjective judgement. PML's profit forecast disclosed three items and three assumptions. Two items (pre-tax profits and extraordinary charges) are shown in the forecast. In addition, a statement that '*...there will still be a liability to taxation which may well absorb a significant proportion of the*

pre-tax profit...' elsewhere in the recommended offer document was counted as one disclosure, even though the amount of the tax liability was not quantified. The three assumptions are historical cost convention, consistent accounting policies and no industrial disputes.

Example: Content analysis of forecast

Rapallo - PML takeover 1991
Extract from recommended offer document

PML GROUP PROFIT FORECAST

Bases and Assumptions

The profit forecast of less than £400,000 on ordinary activities before taxation and the forecast net extraordinary charges of more than £550,000 for the year ending 31 December 1990 have been prepared under the historical cost convention on the basis of the accounting policies normally adopted by the PML Group. The profit forecast includes results shown by the unaudited interim results for the six months ended 30 June 1990, unaudited management accounts for the three months ended 30 September 1990 and a forecast of the PML Group's results for the three months ending 31 December 1990.

In the preparation of the profit forecast the Directors have assumed that trading will not be affected by industrial unrest or other events causing disruption to the PML Group's operations or those of its major suppliers or customers.

Table 4.15 Number of times item disclosed in forecasts

Turnover	26
Exceptional items	58
Profit for the year (variously defined)	231
Taxation	71
Extraordinary items	48
Earnings per share	132
Forecast dividends	91
Sundry other disclosures	97
Notes to forecasts expanding on disclosures	
Earnings per share note	45
Exceptional and extraordinary items notes	31
Sundry other notes	79
Total number of items disclosed in all forecasts	909
Average per forecast	3.64

Tables 4.15 and 4.16 list the types of items and assumptions disclosed and frequency of their disclosure. The number of items disclosed in each forecast varied considerably, as did the variety. Most forecasts disclosed an amount for

profit (variously defined as profit before taxation, after taxation, before taxation and extraordinary items etc.). Earnings per share was frequently disclosed, as was forecast dividends. The average number of assumptions disclosed is greater than the average number of items disclosed. The variety of assumptions disclosed was considerable. Some assumptions appeared regularly in forecasts and used fairly standard wording.

Table 4.16 Number of times assumption disclosed in forecasts

No change/consistent accounting policies used	146
No industrial disputes, wars etc.	116
No change in interest rates	94
No change in the rates or bases of taxation	89
Expenses in connection with the takeover excluded	82
No change in exchange rates	81
No change in legislation (except for...)	71
No change in fiscal/political/economic environment	70
Continuation of present management	66
No change in composition of the group	48
No change in the rate of inflation	46
No severe weather conditions	44
No change in commercial/operating policies	39
Trading volumes/sales margins consistent with previous/current	34
Planned transactions to go ahead	33
Consistent accounting policies except for....	29
(Modified) historic cost convention followed	26
No change in product/raw material prices	18
No disruption to arrangements with suppliers	16
No adjustments for post balance sheet events	11
Other assumptions	112
Total number of assumptions disclosed	1271
Average per forecast	5.08

Frequencies of disclosure of number of items (ITEMS) and number of assumptions (ASS) are shown in table 4.17. ITEMS is highly skewed towards lower numbers disclosed. ASS has a bimodal distribution, with a peak at zero and another peak at nine assumptions disclosed.

Table 4.17 Frequencies of ITEMS and ASS

	ITEMS		ASS	
No. disclosed	Number forecasts	Total disclosures	Number forecasts	Total disclosures
0	36	0	37	0
1	42	42	31	31
2	31	62	25	50
3	30	90	20	60
4	32	128	17	68
5	24	120	14	70
6	13	78	11	66
7	13	91	16	112
8	9	72	18	144
9	6	54	23	207
10	5	50	9	90
11-15	7	87	28	357
16-18	2	35	1	16
	250	909	250	1271

4.2.4.2 Measurement of forecast-related independent variables

There were five forecast-related independent variables: circumstances of the forecast, forecast horizon, forecast period, news in the forecast and forecast deviation. Two of the independent variables relate to news content of the forecasts and are dealt with in section 4.2.5. Definition and measurement of forecast-related variables are summarised in table 4.18.

Circumstances of forecast (CIRC) ranged from voluntary, to involuntary, to repeat forecasts. Forecast horizon (FHOR) was measured in days from date of the forecast to forecast period end. Forecast period (PER) is the period forecast which is usually six months or one year, but varied from 18 weeks to five years. This variable was coded 0 for forecasts of six months or less and 1 for forecasts of more than six months.

Table 4.18 Definition and measurement of forecast-related variables

Dependent variables

- Items disclosed (ITEMS): Number of items disclosed in forecast
- Assumptions disclosed (ASS): Number of assumptions disclosed in forecast

Independent variables

- Circumstances of forecast (CIRC): 1 = Voluntary, 2= Involuntary, 3= Repeat forecast
- Forecast horizon (FHOR): Days from date of forecast to forecast period end
- Forecast period (PER): 0 = 6 months or less, 1 = More than 6 months
- News in the forecast (NEWS): Difference between forecast and previous year's actual results
- Forecast deviation (FD): Difference between forecast results and market expectations

Table 4.19 Prediction of impact of independent variables on content of disclosures in forecasts

Independent variable	Impact on disclosures in forecasts
<u>Takeover-context variables</u>	
BT	B? Targets will disclose more than bidders T+
BID	+ Contested bids will have a positive effect on content of disclosures
<u>Forecast-related variables</u>	
CIRC	- Involuntary forecasts will disclose less than voluntary forecasts
FHOR	+ The longer the forecast horizon, the greater the uncertainty and the greater the need for disclosure
PER	The longer the forecast period, the greater the uncertainty and the greater the need for disclosure
<u>Firm-specific variables</u>	
VAL/REV/TA1/TA2	+ Larger firms are more likely to disclose more
LEV	+ Higher leverage results in higher agency costs and therefore greater disclosure
MO	- Lower management ownership results in greater agency costs and consequently greater disclosure
SSH/NO.SSH	- Substantial shareholders can be informed privately
QUOTED	+ UK listed firms will disclose more
IND	?
NAT	?

4.2.4.3 Predicted response of content of disclosures in forecasts to independent variables

The expected impact of each independent variable on disclosures in forecasts (H_{20} - H_{33}) is shown in table 4.19.

4.2.4.4 Summary descriptive statistics - forecast-related variables

Nearly all (210 out of 250) forecasts were made voluntarily. In 27 cases, Stock Exchange rules required that a statement made prior to the bid by the company be formally reported on as a forecast. There were 13 forecasts which were repeats of forecasts made in previous bids.

Table 4.20 analyses the source of the forecasts. Location in the takeover document depended on whether the target or bidder made the forecast and on whether the bid was contested or not. Thus, all forecasts by target companies in contested bids were disclosed in defence documents.

In most cases, forecasts were disclosed in an appendix to the takeover document (either offer document, listing particulars (where shares were offered as consideration) or defence document). Occasionally they were in the body of the document (especially defence documents which do not follow as predictable a format as stock exchange documents).

Table 4.20 Source of forecasts

Offer document	82
Listing particulars	46
Offer document & listing particulars	25
Defence document	91
Other	6
	250

Table 4.21 analyses forecast disclosure by forecast horizon and forecast period. The forecast horizon is the number of days between issuing the forecast and the forecast period end date. A substantial number of forecasts were published after

the forecast period end. Only a few were published more than six months before the forecast period end.

Table 4.21 Forecasts analysed by forecast period and forecast horizon

	6 Months or less	More than 6 months	Total
After forecast period end	17 (68%)	64 (28%)	81 (32%)
Within 30 days	5 (20%)	36 (16%)	41 (17%)
31-90 days	3 (12%)	50 (22%)	53 (21%)
91-180 days	0 (0%)	53 (24%)	53 (21%)
>180 days	0 (0%)	22 (10%)	22 (9%)
	25 (100%)	225 (100%)	250 (100%)

Pearson chi-square 20.53 (d.f. 4) Significance 0.00

Usually, the forecast was annual, although there were a number of half year forecasts. In one case, the forecast was for a five year period. The forecast period was significantly related to the forecast horizon. The longer the forecast horizon, the longer the period forecast.

4.2.5 Factors influencing disclosures in forecasts: news content

News in forecasts is measured using two variables, depending on whether the forecast results are compared with analysts' forecasts at the time the forecast is disclosed, or are compared with previous period's results. It is not possible to compare the forecast results with subsequent actual results as these are only available in a small number of cases. This is because most forecasts were disclosed by targets, most of which were successfully taken over. Consequently results are not separately available for these companies.

Each of the two news variables is analysed between good news and bad news, depending on whether the forecast was greater or less than analysts' forecasts/previous period's results.

4.2.5.1 Measurement of news content variables

News in the forecast (NEWS) is measured as the difference between forecast results and previous year's actual results, scaled by previous year's results.

$$\text{NEWS} = \frac{\text{Forecast profit before tax - Previous year's profit before tax}}{\text{Previous year's profit before tax}}$$

Forecast deviation (FD) is the difference between forecast results and market expectations, as measured by consensus analysts' forecasts from *The Earnings Guide*. Consensus analysts' forecasts were obtained from the issue of the guide closest to and prior to the bid date. The difference was scaled as follows:

$$\text{FD} = \frac{\text{Forecast profit before tax - Consensus analysts' forecast profit before tax}}{\text{Consensus analysts' forecast profit before tax}}$$

4.2.5.2 Predicted news content in forecasts

Table 4.22 shows the predicted direction of the news content of the forecasts - whether they report good news or bad news (H_{34}).

Table 4.22 Predicted news content in forecasts

Independent variable	Impact on disclosure
• News in the forecast (NEWS)	Forecasts will mainly report good news
• Forecast deviation (FD)	Forecasts will mainly report good news

4.2.5.3 Summary descriptive statistics - news in forecasts variables

Table 4.23 Descriptive statistics of news variables

Variable	Mean	Median	Skewness[1]	Standard deviation	No.	Missing values	Total
NEWS	0.49	0.28	2.24	1.17	153	97 (63%)	250
GOODNEWS	0.76	0.34	3.13	1.10	123		
BADNEWS	-0.62	-0.51	-2.32	0.64	30		
FD	0.06	0.03	-0.43	0.66	117	133 (53%)	250
POSFD	0.35	0.16	2.48	0.54	69		
NEGFD	-0.37	-0.17	-3.63	0.59	48		

[1] Coefficients are all outside the range specified in Kanji (1993) for the variables to be considered normally distributed.

Table 4.23 reports descriptive statistics for the news content variables. The good news variables (GOODNEWS/POSFD) are not dissimilar to the bad news variables (BADNEWS/NEGFD). As one would expect, the mean of forecast deviations is close to zero and the mean of news in the forecasts is positive.

4.3 Missing values

Missing values reduce the number of cases available for analysis. One variable, substantial shareholdings (SSH), has a large number of missing values. Models were run both including and excluding this variable to increase the number of cases for analysis.

4.3.1 Analysis of disclosure of forecasts

Excluding SSH increases the cases analysed to 302 (from 181) for bidders and to 523 (from 375) for targets. There are a large number of missing cases for bidders - 399 (57%) out of 701. Of the 399 missing cases, 350 are individuals, consortiums of individuals, private companies and foreign quoted companies. These types of bidders are unlikely to disclose a forecast. Only 49 (out of 331 quoted bidders (15%)) bidders quoted on the London Stock Exchange were missing cases excluded from the analysis. The effect of these missing values would be , if anything, to understate the results.

4.3.2 Content analysis of disclosures in forecasts

Excluding substantial shareholdings (SSH) increases the number of forecasts analysed to 205 (from 141), out of a maximum of 250 forecasts. The characteristics of the smaller samples (141/205 forecasts) and their descriptive statistics were compared with the full sample of 250 forecasts. There was no significant difference in characteristics or descriptive statistics of the group of 205 forecasts, except that a substantial number of repeat/involuntary forecasts were excluded. There were 40 out of 250 in the full sample, compared with only 11 out of 205 involuntary/repeat forecasts in the smaller sample.

There were more significant differences in the smaller group of 141 forecasts: the firms in this group were significantly smaller than for the full 250 sample of forecasts; only 28 (19%) of this group were bidder forecasts compared with 67 (27%) out of 250 forecasts in the full sample; only 10 forecasts were involuntary/repeat forecasts compared with 40 in the full sample; only one firm was quoted in this group compared with 13 in the full sample.

In summary, there are some differences in the restricted groups available for analysis compared with the full sample. These differences are significant in the case of the smaller group of 141 forecasts.

4.4 Statistical analysis

Raw data were first recorded on a Lotus spreadsheet. A number of procedures were carried out to ensure the accuracy of extraction of the data from original sources, and to check the accuracy of inputting the data to Lotus. All data extracted originally from *Acquisitions Monthly* were rechecked against *Acquisitions Monthly*. It was not possible to recheck data extracted from takeover documents and from *Crawford's Directory*. However, validation tests were carried out to pick up errors. For example, the variable, total assets (TA1), was compared with owners' equity (TA2) to ensure that owners' equity was not greater than total assets; value of bid (VAL) was compared with owners' equity (TA2) to ensure that value of bid was greater than, or was not materially different from, owners' equity.

Statistical analysis was performed using statistical analysis software, Statistical Package for the Social Sciences (SPSS/PC), and Time Series Package (TSP) which read the data directly from the spreadsheet. The conventional 5% level is used for all significance tests.

Basic descriptive univariate and nonparametric bivariate statistics were calculated, including chi-square tests of independence of two variables and Mann-Whitney U tests of differences in mean rankings of variables.

Four multivariate techniques were used. Logistic regression (logit analysis) was used to test the dichotomous dependent variable: disclosure/nondisclosure of a forecast. Ordinary least squares (OLS) regression, Poisson regression and negative binomial regression were used to test disclosures in forecasts. OLS regression and Poisson regression results are not shown as they were broadly consistent with negative binomial regression results, and as negative binomial regression is clearly the most appropriate statistical technique for the data.

4.4.1 Univariate and bivariate statistics

As tables 4.10, 4.13 and 4.23 show, nearly all of the variables are very skewed and assumptions of normality are inappropriate. Consequently, nonparametric bivariate statistical tests (which require no assumptions about the form of distribution of the variables) are used in this research. Spearman rank correlations examine the correlation between the independent variables and are reported in appendix 3. Mann-Whitney U tests are applied to continuous variables for forecasters and nonforecasters, and bidders and targets, to test the hypothesis that the two independent samples come from populations having the same distribution. Simple two-way crosstabulations are performed to calculate bivariate correlations between categorical variables. Related Pearson chi-square statistics are reported.

4.4.2 Logit analysis

Probit and logit analysis specifically deal with violation of assumptions of regression analysis arising from a dichotomous dependent variable (forecast disclosure/nondisclosure in this research). There is little to choose between logit and probit models. In probit analysis, a normal distribution is assumed. The data in this study are not all multivariate normal.

The estimating technique adopted to test models of the determinants of disclosure of forecasts is logit analysis. The object of the logit model is to find estimates of regression coefficients which maximise the log likelihood that the observed pattern of disclosure/nondisclosure would have occurred. The dependent variable

in the logit model is the probability of disclosure given values of the independent variables. Maximum likelihood estimation is used to estimate logit parameters that imply the highest probability or likelihood of having obtained the observed sample.

For categorical independent variables (YEAR, CON, IND, NAT) with more than two categories, categories are calculated by reference to the average effect of all categories rather than compared to a reference category.

Logistic regression is estimated using forward stepwise selection (Norusis, 1990). First, variables with the smallest Rao's efficient score statistic (cutoff 0.05) are entered into the model. Both the Wald statistic and likelihood-ratio test were used to determine the variables to be removed from the model. Variables with the largest Wald statistic/likelihood ratio statistic are removed provided they exceed the cutoff value (0.10). The reported results are based on removal using the Wald statistic.

4.4.2.1 Goodness of fit measures

There are various ways of assessing whether the model fits the data. A good model is one that results in a high likelihood of the observed results. This translates into a small value of -2LL (if the model fits perfectly, the likelihood is 1, and -2 times the log likelihood is 0). -2LL is a measure of how well the estimated model fits the data or is a comparison of the model with the 'perfect' model. A *large* significance level for -2LL indicates that the model does not differ significantly from the 'perfect' model. Another statistic that tests how well the model fits is the goodness-of-fit statistic. A *high* significance indicates a good fit. Model chi-square is comparable to the F-test for regression and tests the null hypothesis that the coefficients for all the terms in the model, except the constant, are zero.

The R statistic measures partial correlation between the dependent variable and each independent variable. It ranges from -1 to +1. A positive value indicates that,

as the variable increases in value, so does the likelihood of the event occurring. Small values of R indicate that the variable has a small partial contribution to the model.

Logit analysis has the advantage that the analysis and interpretation are quite similar to multiple regression. However, with logit analysis there is no good measure of explained variation such as R^2. Various pseudo R^2 measures have been suggested. McFadden's pseudo R^2 is reported in this research.

$$\text{McFadden's } R^2 = 1 - \frac{LL_1}{LL_0}$$

where LL_0 and LL_1 are the values of the log likelihood when the model contains a constant, and all the explanatory variables, respectively.

4.4.2.2 Significance tests

The significance level for each coefficient indicates the confidence with which the result can be generalised beyond the sample. There are two approaches to testing the significance of the coefficients. The first is to compare the log likelihood of the estimated coefficient (L) to the log likelihood that the coefficient is zero (the restricted coefficient L^R). The likelihood ratio test is as follows:

$2(L - L^R)$

where L and L^R are log likelihood values with and without the explanatory variables. It can be shown that if the null hypothesis is true, the likelihood ratio $2(L - L^R)$ has a chi-square distribution.

The second approach to hypothesis testing is to compare estimated coefficients to their standard errors. The test that the coefficients are 0 is called the Wald statistic which has a chi-square distribution. This significance statistic is reported in the research.

4.4.2.3 Presentation of logit results

For ease of interpretation, the logit coefficients for each variable are presented in the chapters in exponential form. Thus, each coefficient estimates the

multiplicative effect of the associated variable on the odds of disclosure of a forecast, controlling for the effects of the other variables in the model. Where the coefficient in greater than 1, the odds of disclosure are *raised* by the factor represented by the coefficient; where the coefficient is less than 1 the odds are *reduced* by the factor shown.

4.4.2.4 Multicollinearity and logit analysis

Model fitting with logistic regression is sensitive to collinearities among independent variables (Hosmer and Lemeshow, 1989). Aberrantly large estimated standard errors are an indication of multicollinearity. Schaefer (1986) suggests a number of alternative estimators which reduce the effect of collinearity.

In order to avoid as much as possible problems of collinearity, the four size variables (the most highly correlated independent variables) are included in the logit models separately.

4.4.3 Count data models

Disclosures in forecasts were measured using a counting approach. Resulting variables are non-normal, non-negative integer variables. Consequently the statistical techniques (mainly OLS regression) applied in previous studies measuring disclosure content are not suitable for this kind of data because they assume that error terms are normally distributed.

The standard statistical model for analysing count data is Poisson regression. The Poisson model, and variations thereon, have been used in many contexts in applied economics. These statistical models were recently reviewed in Winkelmann and Zimmermann (1995). The use of Poisson distribution for modelling non-negative integer values often involves empirically questionable assumptions. The Poisson regression model is restrictive in several ways:

- It assumes that the mean and variance of the counts are equal. This fails to account for the overdispersion (variance exceeding the mean) that characterises many data sets.

- It assumes that events occur independently over time.

The assumption that events occur independently over time is generally not a major problem in empirical studies, and is not a problem in this research given the type of data analysed. However, overdispersion is frequently a problem and may be a problem in this research.

4.4.3.1 Negative binomial regression

In the Poisson model, the mean and variance of the counts are constrained to be equal. This is very restrictive since the variance is normally greater than the mean. Negative binomial regression is an extension of the Poisson regression model which allows the variance to differ from the mean. Thus, the negative binomial model is a more flexible model for count data than the more common Poisson model. It allows for overdispersion by the introduction of a random disturbance in the definition of the parameters of the Poisson distribution.

Estimation of the model is based on maximum likelihood methods. Unlike least squares estimation, this method of estimation takes account of the non-negative integers in count data and uses the information more efficiently.

Cameron and Trivedi (1986) compared five different count data models using the same empirical data: OLS, normal, Poisson and two negative binomial models. They concluded that relatively few coefficients were sensitive to the choice of model, and those that were had relatively small *t*-ratios. Winkelmann and Zimmermann (1995) compared three different models: Poisson, hurdle Poisson and negative binomial regression. Negative binomial predictions outperformed the other two models. It parameterised more parsimoniously and also had a higher log-likelihood. The authors concluded that one would therefore unanimously choose the negative binomial model.

4.4.3.2 Negative binomial regression evaluation

Three tests were performed to determine whether the fitted negative binomial model is adequate and well specified: goodness of fit - chi-square test, pseudo R^2 and likelihood ratio test.

A generalised Pearson chi-square statistic (Winkelmann and Zimmermann, 1995) was used as a measure of the goodness of fit of the negative binomial model, calculated as follows:

$$\chi 2 = \sum_{i=1}^{n} \frac{(y_i - \lambda_i)^2}{\lambda_i}$$

where: y_i = actual count; λ_i = estimated or expected count mean.

Pseudo R^2 is a measure of the extent to which alternative models (negative binomial regression in this research) outperform primitive ones (Poisson model) (Winkelmann and Zimmermann, 1995). Pseudo R^2, like R^2 in linear regression, is bounded to the interval [0,1]. It is 0 if no improvement occurred and 1 if the alternative model has a perfect fit. Pseudo R^2 is calculated as follows:

$$PseudoR^2 = \frac{1 - s^{alt}}{s^{psn_0}}$$

where:

s^{alt} = sum of the squared deviations of the alternative (negative binomial) model

s^{psn_0} = sum of the squared deviations of the 'primitive' (Poisson) model.

The negative binomial model is one example of a generalised Poisson model which relaxes some of the restrictions of the Poisson model. Because the negative binomial model and the Poisson model are nested, a direct test assessing the validity of the restriction can be examined by a likelihood ratio test. The likelihood ratio test compares the more general negative binomial model with the more restricted Poisson model.

4.5 Summary and conclusions

This chapter described the population and sample on which the research is based. Data collection techniques were outlined and details were given of the measurement of the variables tested in the research. Summary descriptive statistics for the variables were presented. The chapter finished by outlining the statistical techniques used in analysing the data.

Chapter 6 reports the results of analysis of the influences hypothesised to be related to the primary dependent variable, disclosure/nondisclosure of forecasts. The influence of market expectations on disclosure of forecasts is examined. Chapter 6 concludes with an examination of the effect on the outcome of bids of disclosing a forecast.

Results of content analysis of disclosures in forecasts are reported in Chapter 7 News content of forecasts is also analysed between reporting good news and bad news.

Chapter 5: FACTORS INFLUENCING DISCLOSURE: EVIDENCE FROM INTERVIEWS

5.1 Objective of interviews

To understand the disclosure process better, and to validate the research hypotheses and design against the practice and opinions of those involved in the disclosure decision, 11 participants in the disclosure decision were interviewed. In addition, the interviews provide some background on the strategic issues underlying disclosure. It was hoped that by exploring in advance the issues considered by this research with those involved in real life disclosure decisions, the resulting research design would be improved and would be more relevant to real world situations.

The interview method applied is described in chapter 4 (paragraph 4.2.1.1). Interviews suffer from a number of limitations (Patton, 1990). Interviewees may have incentives to disguise their true motives. Interviewees may rationalise past decisions. There is a problem in deciding who makes the specific disclosure decision and, therefore, who to interview in the organisation. In attempting to avoid some of these limitations, a broad range of persons involved in the disclosure decision were interviewed from as wide a variety of takeover contexts as possible.

A semi-structured interview method was used whereby every interviewee was sent an outline interview guide (reproduced in appendix 1) which ensured that the same information was covered in each interview. Each interview was allowed to develop beyond the interview guide according to individual responses. This type of interview is structured in terms of issues addressed by the research (the interview guide is cross-referenced to the research hypotheses being tested) yet the informal conversational approach allows respondents to introduce material not anticipated by the interviewer (Whyte, 1984). Following the interviews, and taking into account the responses obtained, the hypotheses for testing were

refined. Thus, the interview guide does not probe answers for all hypotheses, some of which were added/expanded on as a result of the interview data.

Brenner (1982) identifies three sources of interviewer bias with this interview approach which may influence interviewee responses. Firstly, the outline interview guide might give interviewees some insights into the responses expected by the interviewer. Secondly the behaviour of the interviewer may evoke certain responses from interviewees. Thirdly, interviewer expectations may affect the data. Moser and Kalton (1971) state '*Tighter control is needed over probing with opinion questions because of the ease with which slight wording variations can affect the respondent's opinions. On no account must the interviewer give an indication of her own views*'. An additional source of interviewer bias is in editing of interview material. As this research relies on other methodologies in addition to interview data, it is hoped that the effects of interview bias will be limited.

Table 5.1 Background of interviewees

A	Merchant banker who has advised in many takeover bids
B	Merchant banker who has advised in many takeover bids
C	Merchant banker who has advised in many takeover bids
D	Merchant banker who has advised in many takeover bids
E	Corporate finance partner in a big-six accounting practice
F	Deputy director general of the Takeover Panel
G	Director of a target forecasting (X_2 plc) company in an uncontested bid
H	Director of a target forecasting company (X_1 plc) in a contested bid
I	Director of a nonforecasting target (X_6 plc) in a contested bid
J	Director of a forecasting bidder (X_7 plc) in a contested bid
K	Director of a forecasting bidder (X_3 plc) in an uncontested bid

5.2 Sample selection

Interviews were conducted in Dublin and London. Interviewees were selected through contacts of the researcher, subject to there being a wide variety of backgrounds, firm positions and takeover contexts represented in the sample, so that all the relevant issues could be explored. All interviewees were involved in takeover bids which are part of the research sample. Eleven interviews were deemed sufficient, as a point of saturation (whereby no additional points were

coming out of the interviews) had been reached. Interviewees were promised confidentiality and are therefore designated by letter only, as are any companies they referred to. Table 5.1 briefly describes the relevant background of each interviewee.

The companies referred to in the interviews are shown in table 5.2.

Table 5.2 List of companies referred to in interviews

X_1	Forecasting target in a contested bid
X_2	Forecasting target in an uncontested bid
X_3	Forecasting bidder in an uncontested bid
X_4	Nonforecasting target in an uncontested bid
X_5	Forecasting target in an uncontested bid
X_6	Nonforecasting target in a contested bid
X_7	Forecasting (involuntary) bidder in a contested bid
X_8	Forecasting target in an uncontested bid
X_9	Forecasting bidder in an uncontested bid
X_{10}	Nonforecasting target in a contested bid
X_{11}	Forecasting target in an uncontested bid

5.3 Analysis and summary of interviews

Initially each interview was typed in full, using the interview outline as a structure to arrange the responses in some common sequence. Subsequently, the responses from all interviewees were grouped together under the interview outline structure.

Table 5.3 summarises some of the responses. Importance of market expectations on disclosure is emphasised by the number of interviewees referring to this influence. The effect of purchase consideration on disclosure in the case of bidders was frequently cited - interviewees mentioned paper consideration as the foremost influence on disclosure of forecasts by bidders. Motivations described to account for targets disclosing forecasts were more varied, but tended to relate to bid price. A number of interviewees made the point that disclosure of forecasts by targets is often imposed as a condition of the offer by bidders.

Table 5.3 Summary of interview responses

	Interviewee										
Reasons for disclosing a forecast	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**
To correct market perceptions	*	*	*	*	*		*				
To back up share valuation	*										
Length of time since last disclosure to the market							*				
Ease of forecasting											*
Reasons for disclosing a forecast - bidders											
To support value of paper consideration	*	*	*	*	*			*			
Reasons for disclosing a forecast - targets											
To get the best value for the shareholders				*	*					*	
Beat off the bid	*									*	
Get an increase in price	*	*								*	
Condition of the bidder	*	*	*								
Justifying the offer (especially low offer)		*									
Reasons for not disclosing a forecast											
Cost	*									*	
Management time involved											
Risk of getting the forecast wrong	*									*	
Downward revision of profit involved		*	*			*		*			
Forecast profit does not justify price being offered								*			
Too far from year end		*									
Unreliable systems		*									
Difficulty with forecasting profits of the company				*				*			
Market perceptions are correct	*			*							
Reasons for not disclosing a forecast - bidders											
Where cash is the consideration	*	*				*					
Reasons for not disclosing a forecast - targets											
Will not result in a better price for the target		*							*		
If the bid can be defended without a forecast		*									
Influences on the disclosure decision											
Advisors		*	*	*	*	*	*	*			*
Other party to the bid		*		*							
Board of directors				*		*	*	*		*	
Whether bid contested		*	*				*				
Market expectations		*								*	
Ability to increase shareholder value					*				*		
News in the forecast		*		*			*	*			
Quality of management		*									
Variability of earnings		*		*	*		*	*		*	*
Economic conditions		*		*			*	*		*	
Industry		*		*	*			*			
Management ownership				*	*			*			
Period to financial year end											
Size of firm							*	*			
Forecasting systems		*		*	*		*				
Leverage				*	*						
Not influences in the disclosure decision											
Management				*							
Size of company	*			*	*						
Economic conditions											
Other party to the bid							*				
Industry							*				
Management ownership	*										
Leverage	*										
Board of directors	*										

A variety of influences on disclosure were suggested, with advisors being the most frequently mentioned. Variability of earnings and economic conditions were considered important influences also. Related to economic considerations, the news content of the forecasts was also referred to.

The main reason offered why companies would not disclose a forecast is downward revision of profit. A variety of other reasons were suggested mainly related to cost (direct costs and management time involved) and risk of getting the forecast wrong.

5.4 Discussion of interviews

The full text interviews have been edited and summarised from 60 to 20 pages of text to remove colloquialisms and repetition, and to focus on the main issues coming from the interviews. The edited summary is included in appendix 2. For ease of reference, the interview comments have been numbered 1 to 162 and the reference numbers are included to the left of the comments in appendix 2.

The interviews are discussed under five headings following from the five questions addressed by this research and outlined in chapter 1.

5.4.1 Factors influencing disclosure of profit forecasts (comments 1-103)

<u>Case histories (comments 1-17)</u>

The case histories illustrate how varied the motivations are for disclosing profit forecasts during takeover bids. They are self explanatory but a number of points are worth highlighting. X_1 plc's forecast appears as a voluntary forecast, even though it was first prompted by the managing director's statement prior to the bid and might not have been made otherwise. It is interesting to see how influential the advisors were in advising and planning for the profit forecast months before the bid was made. That good news was being reported to the market was also crucial to the disclosure decision.

The length of time since results had been given to the market appears to have been a major factor in X_2 plc disclosing a forecast. Ease of forecasting the profits

of X_3 plc, the length of time since results had been announced to the market, as well as obtaining a listing for the first time, were influential in a forecast being disclosed. X_4 plc's story illustrates circumstances where a forecast might not be disclosed - the bid was agreed, and from the target's point of view the price offered was generous. Interviewee B is vague about why X_5 plc disclosed a forecast. Interviewee I brings out the issue of costs versus benefits of disclosure - in X_6 plc's case the benefits could not be identified but the cost of disclosure (risk of getting the forecast wrong) was clearly recognised. X_7 plc's story illustrates just how involuntary the forecast was and how unhappy the company was to be in a forecast situation. Comments 12 and 13 bring out the costs of disclosing a forecast, which include management's time and disruption to the business, as well as payment of fees to advisors.

X_1 plc, X_3 plc and X_9 plc all had good news to report to the market. Had the news been bad it is doubtful whether a forecast would have been disclosed. X_8 plc, on the other hand, disclosed a forecast because of the bad news contained therein. The directors felt it was necessary for shareholders to know this to persuade them to accept the offer (which the directors were recommending) as reasonable, given company prospects as shown by the forecast.

<u>Reasons for disclosing forecasts (comments 18-20)</u>

The responses to this issue are summarised in Table 5.3. Comments 18-20 all emphasise the importance of share value. In the case of bidders, the forecast may support the value of shares being issued in consideration for the bid. For targets, the forecast should ensure that the shareholders get the best value for their shares. Directors in agreed bids need to show shareholders they have obtained the best price, and this may be done with a profit forecast. Such was the reason given in comment 8 for a forecast by X_5 plc. Publication of a forecast was also a condition of the bidder: '*X_5 plc was a recommended offer and probably issued a forecast to convince shareholders that the price was fair and reasonable, to convince the shareholders not to expect too much and to advise shareholders to accept the bid. It was a paper offer so the bidder's forecast was probably to support their*

share price. The issuing of a forecast by X_5 plc was not instigated by the financial advisors. The bidder would not make the bid without a forecast.'

Reasons bidders disclose forecasts (comments 21-26)

Interviewees say that bidders normally only disclose a forecast where paper is included in the purchase consideration. The effect of purchase consideration on disclosure of forecasts is tested in chapter 6. Other reasons suggested for disclosure by bidders are publicity value of disclosing a forecast, to shut out another predator and the contested nature of the bid.

Reasons targets disclose forecasts (comments 27-32)

A variety of reasons why targets might disclose forecasts are offered. Sometimes, as mentioned earlier, in recommended bids it is a condition of the offer by the bidder. Obtaining the best price for the shares and provision of up to date information to shareholders are primary reasons offered for disclosure. Strategic motivations for disclosure are illustrated by comment 32: '*Forecasts are disclosed to talk up the price and possibly encourage a third party to the arena'.*

Reasons for not making a forecast (comments 33-41)

Most of the reasons given for not disclosing are related to cost - cost of preparing the forecast, management time involved and risk of getting the forecast wrong. Comment 13, in the context of an involuntary forecast, emphasises cost: '*The original statement would never have been made had the consequences been foreseen at the time. The paperwork involved to do a profit forecast is huge. Line management had to get involved in the bid. This is very disruptive to the business. There is a greater cost in taking up management time.'*

Interviewees A and J, in comments 33 and 41, say that cost of forecasting is a consideration. Presumably the higher the cost of forecasting, the less likely a forecast will be disclosed. Measuring the costs of making a forecast is difficult. Size might proxy for cost. It could be argued that it would be less costly for larger companies with more sophisticated forecasting systems to make a forecast.

Interviewee D suggests that, if it is too early in the financial year, a forecast will not be published. Interviewee G adds the point that if it is early in the financial year there is little new information to communicate to shareholders. The effect of bid horizon on forecast disclosure is tested in chapter 6.

Reasons bidders do not disclose forecasts (comments 42-45)

Purchase consideration is a major influence on whether bidders disclose forecasts. In cash bids forecasts by bidders are considered unlikely by interviewees. Interviewee B makes the very valid point, in comment 42, that bidders control and choose the timing of the bid, and therefore have less reason to disclose a forecast to prop up the share price: '*Bidding companies do not normally make a forecast, especially if cash is offered, unless they want to keep the share price up or for reasons of credibility. In a paper bid, a forecast may be issued to support the price of the shares being offered and to value the bid higher. The bidder is always in control of the situation so it picks the best time to make the bid and therefore has less reason to make a forecast. It is a poor bidder that has to prop up its own share price.*'

Reasons targets do not disclose forecasts (comments 46-47)

Various reasons why targets would not disclose forecasts are suggested, including length of forecast horizon (which can be altered by choosing a shorter forecast period), level of uncertainty and because the forecast will not benefit the takeover deal - as comment 9 illustrates: '*A profit forecast was strongly considered. Our mentality was that, unless we could establish a clear benefit for publishing a profit forecast, there was no point in doing one. There was a lot of accountants around the table. One automatically associates a forecast with risk. And the automatic tendency is to stay away from a forecast unless clear benefits are obvious. If we had felt that a profit forecast would have led to any reasonable chance of the offer being increased or being overtaken by anyone else, then we would have published a forecast. But we believed neither. The bidder had gone to the top of its range.*'

Why do more targets than bidders disclose forecasts? (comments 48-49)

Comment 48, that bidders tend to be larger and have firmer market ratings, is very relevant to whether they disclose a forecast. On the other hand, comment 49 makes the point that target companies are not in control of the timing of the bid and may have a greater need to inform the market.

Who or what is most influential in the disclosure decision? (comments 50-58)

The board, as advised by its financial advisors and accountants, seems to be the biggest influence on whether a forecast is disclosed, subject to obtaining the best value for shareholders.

Factors within companies influencing disclosure (comments 59-66)

Size *per se* is not felt to be a significant influence, except that larger companies with good public relations will be more correctly perceived by the market and will not have to disclose a forecast to align market expectations, as comment 112 illustrates: '*Companies with characteristics such as good PR, where the management are able to sell themselves, will not need to make a forecast as market perceptions will be generally correct. These are likely to be larger companies. So that larger companies are less likely to make a forecast.*'

On the other hand, larger companies will usually have better forecasting systems and may find it easier, and less costly, to forecast. The variable, size, is tested in chapters 6 and 7 but these comments show that size can proxy for many factors (as pointed out in chapter 3).

Variability of earnings is referred to by most interviewees as influencing disclosure. Interviewee A in comment 112 suggests that the more variable the earnings the more imperative it is, and at the same time the more difficult it is, to make a forecast. Variability of earnings is not tested in this study.

Forecasting systems (comments 67-70)

Good systems seem to be a pre-requisite in making a forecast.

Advisors/accountants (comments 71-75)

Most interviewees disagreed that advisors recommend the making of a forecast to boost their fees, or that choice of advisor influences whether a forecast is made. Influence of choice of advisor is tested in chapters 6 and 7.

Other influences (comments 76-77)

Interviewee G refers to the proprietary cost of disclosure of information to competitors (or equivalent - dominant customer in the case of comment 77). This is the only reference to proprietary costs of disclosure by any interviewee, notwithstanding the extensive theoretical analytical literature on this issue, summarised in chapter 2. However, none of the analytical literature deals with disclosure during takeover bids when proprietary cost considerations may be less important.

Disclosure of private information (comments 78-87)

These comments tease out the extent to which information is disclosed privately during bids and why, if information is disclosed privately, information is also disclosed publicly, especially in recommended offers.

Influence of the fear of getting forecasts wrong (comments 88-94)

What is most feared if the forecast is wrong? (comments 95-103)

There are mixed views on these issues. Loss of reputation (of the advisors especially) seems to be the greatest fear, with threat of litigation and investigation by the Takeover Panel being more distant fears.

5.4.2 Influence of market expectations (comments 104-115)

Most interviewees consider market expectations to have a considerable influence on disclosure of forecasts. To align shareholder expectations is the main explanation offered for this influence. Reference is made to disclosing forecasts that are both below, as well as above, market expectations. The relation between publication of forecasts and market expectations is tested in chapters 6 and 7.

Some specific comments are worth noting. Interviewee E guesses that 80% of brokers' estimates are '*in the right ball park*' and that there is no need to publish a forecast in these circumstances. He adds the interesting point that a general description of the company's circumstances, rather than a formal profit forecast, can be used to align market expectations. This is done very frequently by companies - examples 67 and 68 in appendix 4 are good illustrations.

<u>Reasons for not making forecasts (comments 110-111)</u>

Interviewee D remarks that the requirement for a contingency in making a forecast might reduce forecast profits below market expectations, such that a forecast would not be disclosed. Interviewee G makes the point that a bidder (especially if it is large) has a wider audience of its own shareholders, as well target company shareholders, to consider if it discloses a forecast in a paper bid.

<u>Factors within companies influencing disclosure (comment 112)</u>

This comment, together with comment 105, suggests that larger companies' market ratings will be more correct and that larger companies have less need to disclose forecasts to align market expectations. Interviewee A in comment 105 remarks that: '*Bidding companies tend to be bigger and therefore tend to have firmer market ratings. Their market expectations are more accurate.*'

<u>Disclosure of private information (comments 113-115)</u>

New (since the period of this study) insider trading rules make disclosure of information privately to, say, brokers more difficult. It is now harder to align market expectations privately. Comment 115 illustrates the point: *A company's*

market expectations depend on how well you guide them. This has become a very tricky area since the legislation relating to insider information being disclosed selectively to selective groups. It is much more difficult now to manage brokers' forecasts. This has now become a blunt instrument. How can you guide market expectations without giving insider information?

5.4.3 Defensive role of profit forecasts (comments 116-136)

Is the forecast an effective weapon? (comments 116-132)

Forecasts are generally seen as effective weapons, although there is no agreement on their specific benefit. Interviewees comment that forecasts have an effect on price and on '*sending off a bid*'. The five advisors (interviewees A to E) are particularly strongly of the opinion that forecasts have strategic value. This is hardly surprising as advisors may have vested interests in advocating forecasts. This was denied by interviewees, who generally stated they incurred very high risk and earned little from their association with forecasts. This is illustrated by comment 72: '*Merchant banks, by signing off on forecasts, take a lot of responsibility. Under the Takeover Code there is a lot of responsibility. Bankers don't normally like to take on additional responsibility for the fun of it. They are not driven by fees. The fees charged aren't necessarily governed by the presence of a profit forecast during a bid.*' Interestingly, interviewee C (a merchant banker) goes on to say: '*However, the fees that the accountants charge will increase significantly if a profit forecast is involved.*' Comments 73 and 74 make similar points.

Other strategic reasons for disclosure of forecasts (comments 133-136)

Reference is made to disclosure of forecasts being made for tactical reasons. As comment 135 illustrates, the timing of disclosure is important for PR and information management reasons: '*The timing of the forecast depends on the circumstances. If you have a choice of arguments, you won't use them all at once. The shareholders will get bored after the first one or two documents. A drip feed approach is used which can be quite useful to keep peoples' attention. You issue new stories at regular intervals. During the bid, the timing of disclosure was measured. The forecast was not included in the first defence*

document. I think it was in about the third circular. Each circular had a different theme. We kept these themes going for public and shareholders' attention. We decided to keep our powder dry and to keep points back for the full period of the bid which was approximately 60 days.'.

5.4.4 Factors influencing disclosures in forecasts: content analysis (comments 137-149)

Detail in forecasts (comments 137-139)

There is no consensus on whether it is better or worse to disclose numerous items. Disclosing many items may give: '*a better explanation to readers*', '*is only a matter of optics*', or '*leaves you wide open to attack from the other side*'. One interviewee added: '*the only number that counts is the bottom line*'. In addition, interviewees are concerned at the extent to which caveats (i.e. assumptions) are included in the forecast.

Assumptions (comments 140-149)

There seems to be an aversion to disclosing too much detail in forecasts. At the same time, assumptions are carefully chosen to give the greatest protection to forecasters, as comment 64 illustrates: '*You cannot use economic conditions as an excuse for not making a forecast. You can build some into the assumptions. If the bid had taken place during the currency crisis, a forecast would have been very difficult. We would have had to put in assumptions about exchange markets. This would not stop the making of a forecast, but might result in including as benign assumptions as possible in the forecast.'*

The conflict between advisors and management on what assumptions should be disclosed is shown in comment 147: '*We always had major problems with the advisors in this area. All our first draft forecasts spelled out the real material assumptions but by the time the forecast got published, these assumptions had become meaningless and were converted to fairly standard assumptions. The real assumptions affecting the company get compromised and standardised. The advisors go to great trouble to standardise the assumptions. This makes it very*

hard for investors to understand and appreciate the forecast. For our own security, we went to great lengths to spell out the assumptions in detail but the advisors watered down everything, and by doing so created risk. If a forecast goes wrong, one has a problem if one can't point to which assumptions failed. By using conservative assumptions, we could have made the forecast look as bad as we liked in order to persuade the shareholders to accept the bid. I would have more confidence in a forecast with no assumptions. I would regard no assumptions as being an underwriting of the forecast. Assumptions are caveats, get-outs.'

5.4.5 Factors influencing disclosures in forecasts: news content (comments 150-162)

The news content of forecasts is of paramount importance in the disclosure decision. Mixed views are expressed on disclosure of bad news and good news, although comments tend to indicate that bad news will not be disclosed as readily as good news, especially in the case of targets.

The following comments are illustrative: '*Good news can be relative. If the market, for example, is saying that profits will be halved and if the drop is not so much, you might make a forecast.*'; '*The news contained in the forecast is definitely important. The company will want to get poor performance news into the market. It might have to make a formal profit forecast justifying reasons why the board recommends shareholders to accept the offer.*'; '*I think the forecast would either be giving good news, or trying to contain bad news. If there is such uncertainty surrounding the circumstances, then a forecast would not be the way in which a company would go. The company would deal with the matter through discussion of the actions that would be taken to contain the problem. Directors would not wish there to be an incorrect impression as to the true position of the company, even if there is bad news to be disclosed.* Whether good news or bad news was disclosed in the forecasts is tested in chapter 7.

5.5 Summary and conclusions

This chapter has analysed and discussed 11 in depth interviews with senior advisors and management of companies which are part of the research sample. The interviews are considered under five headings derived from the issues considered by this research.

Factors influencing disclosure of forecasts are complex and varied, and depend especially on the particular circumstances of takeover bids. However, some factors were regularly commented on by interviewees - bid horizon, whether the bid is contested or not, whether the potential forecaster is a bidding or target company. Purchase consideration was referred to as being particularly influential on whether bidders disclose forecasts.

Costs of making forecasts are a deterrent to disclosure. These include the direct costs of disclosure and the risk of getting the forecast wrong.

Advisors were considered especially influential. Size of firm was regularly referred to, but the direction of the relationship between size and disclosure varied. On the one hand, larger companies have better forecasting systems to facilitate making a forecast. On the other hand, market expectations are likely to be more correct for larger firms, reducing the need for disclosure.

The second research issue is whether market expectations influence disclosure of forecasts. The interviewees were unanimous on this point. Market expectations are a very important influence on disclosure, both when expectations are above as well as below forecasts.

Most interviewees agreed that disclosure of a forecast is an effective weapon in a takeover bid, but there was no consensus on what the effect of disclosure is, or on how disclosure of a forecast benefits the forecaster.

Table 5.4 Summary results of interviews analysed by reference to hypotheses

Hypothesis	Interview findings
Influences on disclosure	
H_1 (YEAR)	Supported
H_2 (BT)	Supported
H_3 (BID)	Supported
H_4 (CON)	Supported: Bidders will only disclose forecasts during paper bids
H_5 (BHOR)	Supported
H_6 (Size)	Neither supported nor rejected: Size is important but direction of influence on disclosure is unclear
H_7 (LEV)	Not supported
H_8 (MO)	Not supported
H_9 (SSH)	Hypothesis not probed in interview
H_{10} (AUD)	Supported
H_{11} (MB)	Supported
H_{12} (QUOTED)	Hypothesis not probed in interview
H_{13} (IND)	Hypothesis not probed in interview
H_{14} (NAT)	Hypothesis not probed in interview
H_{15} (ME)	Supported: Market expectations most important influence on disclosure
Influence on outcome of bid	
H_{16} (Success-bidders)	Supported ⎫ There was no consensus
H_{17} (Offer price-bidders)	⎪ on how disclosure
H_{18} (Success-targets)	Supported ⎪ of a forecast
H_{19} (Offer price-targets)	⎭ benefits the forecaster
Influence on disclosure content	
H_{20} (BT)	⎫
H_{21} (BID)	⎪
H_{22} (CIRC)	⎪
H_{23} (FHOR)	⎪ Individual hypotheses were not
H_{24} (PER)	⎪ discussed in interviews.
H_{25} (Size)	⎪ Views varied on whether
H_{26} (LEV)	⎪ it is better to disclose
H_{27} (MO)	⎪ more/less items in forecasts.
H_{28} (SSH)	⎪ More assumptions were taken
H_{29} (AUD)	⎪ to reflect greater uncertainty
H_{30} (MB)	⎪ in forecasts
H_{31} (QUOTED)	⎪
H_{32} (IND)	⎪
H_{33} (NAT)	⎭
H_{34} (News)	Mixed views on whether the news disclosed will be good or bad, with support for a tendency to disclose good news

Views on the disclosures contained in forecasts were mixed. There seemed to be a preference for detailed forecasts but, at the same time, a concern that more detailed forecasts include more caveats, making achievement of the forecasts less certain.

The last research issue, news content of forecasts, was also the subject of mixed views. There was no clear agreement on whether good news rather than bad news forecasts are disclosed.

In summary, the findings of the interviews are related to the hypotheses tested by the research in table 5.4.

Chapter 6: FACTORS INFLUENCING DISCLOSURE OF FORECASTS: QUANTITATIVE ANALYSIS

This chapter reports empirical results of testing three of the five research issues identified in chapter 1. Chapter 3 outlined the development of hypotheses to test these as follows:

- What factors significantly influence voluntary disclosure of profit forecasts? (H_1-H_{14})
- What effects do prevailing market expectations of firm profitability have on disclosure? (H_{15})
- Is disclosure of a forecast an effective weapon in defence or completion of a bid? (H_{16}-H_{19})

Analysis of bidders and targets

As motivations for disclosing forecasts are different for bidders and targets, the incidence of disclosure is expected to be different for the two groups. Evidence from informal interviews with advisors, directors and management of companies involved in takeovers (see chapter 5 for details) suggests that benefits of making a forecast are much greater for target companies than for bidders. Bidding companies control the timing of the approach and are therefore more likely to make a bid when market conditions are favourable for them. Target companies have no such control over events and therefore have a greater need to signal information to shareholders to adjust market expectations. Consequently, disclosure of forecasts by bidders is analysed separately from disclosure by targets. A comparison of bidder and target results is then made.

Analysis of agreed and contested bids

Prior research in developing takeover prediction models has found that targets differ according to whether the takeover was friendly or hostile (Mørck, Shliefer and Vishny, 1988; Powell, 1995). Thus, in addition to analysing forecast disclosure between bidders and targets, disclosure of forecasts is also analysed

between agreed and contested bids. Agreed and contested bid results are then compared.

6.1 Disclosure of forecasts (H_1-H_{14})

There were 250 forecasts disclosed in 197 bids (out of 701 bids - 28%). A second forecast by a bidder or target is ignored for the purposes of the ensuing analysis, as are involuntary and repeat forecasts, leaving 188 bidders/targets (47 bidders and 141 targets) voluntarily disclosing a forecast. Of the 188 voluntary forecasts, 99 were disclosed during agreed bids and 89 during contested bids.

6.1.1 Bivariate analysis for bidders and targets

Bivariate analysis is summarised in tables 6.1 and 6.2. Full statistics are shown in tables A3.1 and A3.2 in appendix 3. Table 6.1 reports Mann-Whitney U test differences in mean rankings of the continuous variables (except for deviation from market expectations (ME) which is dealt with in section 6.2) of the two groups: forecasting and nonforecasting firms. Analysis of categorical variables between forecasters and nonforecasters, for bidders and for targets, is summarised in table 6.2. As expected, a forecast is significantly more frequent in the case of targets (141 forecasts (20%) out of 701) compared with bidders (47 forecasts (7%) out of 701).

<u>Bivariate analysis - full sample</u>

For the full sample, forecasters and nonforecasters differ significantly on bid horizon (BHOR), value of bid (VAL), management ownership (MO) and type of bid (BID). Forecasters have shorter bid horizons, are party to larger value bids and have lower management ownership. Significantly more forecasts are disclosed during contested bids. Bivariate results for bidders are very different from the results for targets.

<u>Bivariate analysis - bidders</u>

Bidders' mean rankings differ significantly on bid horizon (BHOR) , value of bid (VAL), turnover (REV) and percentage substantial shareholdings (SSH). The

mean rankings for bid horizon (BHOR) and percentage substantial shareholdings (SSH) are significantly lower for forecasting bidders. The mean rankings for value of bid (VAL) and turnover (REV) are significantly higher for forecasting bidders. As expected for bidders, forecast disclosure is related to purchase consideration. Forecast disclosure is significantly greater in paper bids especially, and also in mixed (cash and paper) bids. Very few (only four) bidders disclosed a forecast during cash bids. These four cash bids were examined to identify possible reasons for forecast disclosure by bidders. In two cases, shares were issued to raise cash for the bid. The forecast was motivated by the sale of shares rather than the takeover. In the remaining two bids, the contested nature of the bid seems to be the motivation for disclosure, even though the consideration is cash. Disclosure of a forecast might have been made to influence target shareholders (or possibly bidder shareholders) concerning the competence of bidder's management ability. Forecasting and nonforecasting bidders differ significantly on listing status (QUOTED) and nationality (NAT). Listed bidders and UK bidders disclosed significantly more forecasts. Only two foreign bidders disclosed a forecast. Both were Dutch quoted companies. These results are all in the directions predicted in chapter 3.

There is no support in the case of bidders for the influence of economic conditions (proxied by year) (H_1), leverage (H_7), percentage management ownership (H_8), auditor/reporting accountant (H_{10}) and financial advisor (H_{11}). The null hypothesis of no industry influence, H_{13}, is supported.

<u>Bivariate analysis - targets</u>

Mann-Whitney mean rankings of targets differ significantly on all variables except number (NO.SSH) and percentage substantial shareholdings (SSH). The mean rankings for bid horizon (BHOR) and percentage management ownership (MO) are significantly lower for forecasting targets. The mean rankings for value of bid (VAL), turnover (REV), total assets (TA1), owners' equity (TA2) and leverage (LEV) are significantly higher for forecasting targets. Type of bid (BID), financial advisor (MB), auditor/reporting accountant (AUD) and industry (IND) are

significantly different for forecasting and nonforecasting targets. As predicted, the frequency of forecast disclosure by targets is significantly greater in contested bids and where higher reputation firms of financial advisors and big-six auditors are involved in the bid. The industry profile for target company forecasters and nonforecasters is also significantly different. There are fewer forecasts in the durable goods sector and the banking and financial sector. These results are all in the directions predicted in chapter 3.

There is no support in the case of targets for the influence of economic conditions (H_1), purchase consideration (H_4), percentage substantial shareholdings (H_9) and nationality (H_{14}).

Table 6.1 Mann-Whitney U tests of differences in mean rankings between forecasters and nonforecasters for each continuous independent variable

	Full sample		Bidders only		Targets only	
	Z-stat.	Two-tailed prob.	*Z*-stat.	Two-tailed prob.	*Z*-stat.	Two-tailed prob.
BHOR	-5.69	0.00**	-3.42	0.00**	-4.57	0.00**
VAL	-7.01	0.00**	-3.85	0.00**	-6.03	0.00**
REV	-1.62	0.11	-1.96	0.05*	-6.26	0.00**
TA1	-1.48	0.14	-1.86	0.06	-5.56	0.00**
TA2	-1.18	0.24	-1.83	0.07	-5.38	0.00**
LEV	-1.42	0.16	-0.08	0.93	-3.19	0.00**
MO	-4.08	0.00**	-1.61	0.11	-3.96	0.00**
NO.SSH	-0.08	0.94	-0.70	0.49	-0.47	0.64
SSH	-1.50	0.13	-2.35	0.02*	-0.53	0.59

** Significant at < 0.01 * Significant at ≤ 0.05
Full statistical output for this table is shown in table A3.2 in appendix 3.

As all the variables are variously significantly related to forecast disclosure in bivariate analysis, the choice of these variables to be tested in the research is validated (this is not to say that an exhaustive set of variables was tested).

These initial results show the dominance of takeover-context variables. Four of the five takeover-context variables were significant in the bivariate analysis. For bidders, firm-specific variables were not significantly different between forecasters and nonforecasters. In the case of targets, all firm-specific variables, except for

substantial shareholdings and nationality, were significantly different between forecasters and nonforecasters.

Table 6.2 Chi-square statistics for differences between forecasters and nonforecasters - categorical variables

		Full sample		Bidders only		Targets only	
Variable	d.f.	Chi-square	Signif.	Chi-square	Signif.	Chi-square	Signif.
YEAR	4	6.52	0.16	7.23	0.12	2.24	0.69
BT	1	54.28	0.00**				
BID	1	75.28	0.00**	5.23	0.02*	81.07	0.00**
CON	2	5.44	0.07	32.63	0.00**	3.53	0.17
MB	1	7.16	0.01*	0.33	0.56	12.18	0.00**
AUD	1	2.37	0.12	0.20	0.65	5.42	0.02*
QUOTED	1	52.16	0.00**	22.86	0.00**	N/A	N/A
IND	4	5.24	0.26	6.22	0.18	12.67	0.01*
NAT	2	27.75	0.00**	13.20	0.00**	0.52	0.77

** Significant at < 0.01 * Significant at ≤ 0.05
Full statistical output for this table is shown in table A3.1 in appendix 3.

As number of substantial shareholders (NO.SSH) is so insignificant, this variable is excluded from all subsequent analysis.

6.1.2 Multivariate model

The model specified in chapter 3, estimated using logit analysis, is shown in table 6.3. To avoid potential collinearity problems, size variables are included separately and alternatively in the model. Reported results are based on the size variable, value of the bid (VAL). Results vary depending on which size variable is included in the model. This is analysed in more detail in table 6.9.

Logistic regression is estimated using forward stepwise selection. The tables below and in appendix 3 report the results when the Wald statistic was used to remove variables from the models (with a cutoff of 0.10). The logit coefficients for each of the variables in the models are presented in exponential form in the chapter tables. Thus, each coefficient estimates the multiplicative effect of the

associated variable on the odds of disclosure of a forecast, controlling for the effects of the other variables in the model. Two statistics are reported in the tables to assess whether the model fits the data: -2LL (a *large* significance level indicates that the model does not differ significantly from the 'perfect' model); the goodness-of-fit statistic (a *high* significance indicates a good fit). Model chi-square tests the null hypothesis that the coefficients for all the terms in the model, except the constant, are zero.

Table 6.3 Disclosure model estimated

Disclosure = f (YEAR + BID (or BT)+ CON + BHOR + SIZE + LEV + MO + SSH + AUD + MB + QUOTED + IND + NAT)

Expressing this in log form:

$$\log [P(F) / P(NF)] = B_0 + B_1DYEAR + B_2BID\ (or\ BT) + B_3DCON + B_4BHOR + B_5VAL\ (or\ REV\ or\ TA1\ or\ TA2) + B_6LEV + B_7MO + B_8SSH + B_9AUD + B_{10}MB + B_{11}QUOTED + B_{12}DIND + B_{13}DNAT$$

where:

P(F) and P(NF)	= Probability of a forecast/of no forecast.
DYEAR	= Dummy variables for each year of the study
BID	= Type of bid (only in model for bidders and targets)
BT	= Party to the bid (only in model for agreed and contested bids)
DCON	= Dummy variables for three types of purchase consideration
BHOR	= Bid horizon
VAL	= Value of bid
REV	= Turnover of the firm
TA1	= Total assets of the firm
TA2	= Owners' equity of firm
LEV	= Leverage of firm
MO	= Percentage management ownership of firm
SSH	= Percentage substantial shareholdings in firm
AUD	= Auditor/reporting accountant
MB	= Financial advisor
QUOTED	= Whether quoted
DIND	= Dummy variables for five categories of industry
DNAT	= Dummy variables for three groups of nationalities

Tables 6.4 to 6.7 and tables 6.11 to 6.14 summarise the results and only report coefficients for the significant variables remaining in the models after forward stepwise selection. Full results of all variables, both included and excluded, are reported in appendix 3. These full output tables show the standard regression coefficients (i.e. not in exponential form).

6.1.3 Disclosure by bidders - multivariate analysis

In order to increase the number of cases analysed it was decided that percentage substantial shareholdings (SSH) should be excluded from the model as this variable has a large number of missing values. The exclusion of SSH increases the number of cases analysed from 186 to 308 (out of a maximum of 701 cases).

Model including substantial shareholdings (SSH) (Table 6.4)

Three variables in the model are significant: bid horizon (BHOR), year (YEAR) and type of bid (BID). As predicted, the probability of disclosure increases as bid horizon decreases and during contested bids. Forecasts are also more likely in the earlier years of the study.

Table 6.4 Logit estimation of model for bidders - including SSH

Explanatory variables	Coeff.	Signif.	R
BHOR	0.01	0.00**	-0.34
YEAR (1988)	13.09	0.66	0.00
YEAR (1989)	3.66	0.83	0.00
YEAR (1990)	7.12	0.74	0.00
YEAR (1991)	3.14	0.85	0.00
BID	5.41	0.00**	0.21

-2 Log likelihood 87.95 Significance 1.00
Goodness of fit 143.88 Significance 0.97
Model chi-square 47.27 (d.f. 6) Significance 0.00
Pseudo R^2 0.35
Number of observations 186 cases (22 F; 164 NF)
** Significant at < 0.01 * Significant at ≤ 0.05

Dependent variable: disclosure/nondisclosure of a forecast
Coefficients = Multiplicative logistic regression estimates

Full statistical output for this table is shown in table A3.6 in appendix 3.

Model excluding substantial shareholdings (SSH) (Table 6.5)

Five variables are included in this model: bid horizon (BHOR), size (VAL), year (YEAR), type of bid (BID) and purchase consideration (CON). The probability of disclosure increases as bid horizon decreases, increases for larger companies

and during contested bids. Significantly more forecasts are probable in paper bids and significantly fewer in cash bids. Significantly more forecasts are disclosed in 1988 1990.

In both models, bid horizon (BHOR) has considerably more explanatory power (R) than the other significant variables included in the models. However, the effect of type of bid (BID) on probability of disclosure is greater. The multiplicative coefficients indicate that the odds of disclosing a forecast are 5.41/3.34 times greater during contested bids. The odds of disclosing a forecast in years 1988 and 1990 are also high.

Table 6.5 Logit estimation of model for bidders - excluding SSH

Explanatory variables	Coeff.	Signif.	R
BHOR	0.03	0.00**	-0.29
VAL	1.00	0.05*	0.09
YEAR (1988)	2.57	0.01*	0.15
YEAR (1989)	0.61	0.33	0.00
YEAR (1990)	2.26	0.05*	0.09
YEAR (1991)	0.62	0.34	0.00
BID	3.34	0.01*	0.15
CON (CASH)	0.25	0.01	-0.15
CON (PAPER)	2.83	0.00	0.18

-2 Log likelihood 160.72 Significance 1.00
Goodness of fit 250.68 Significance 0.98
Model chi-square 57.37 (d.f. 9) Significance 0.00
Pseudo R^2 0.26
Number of observations 308 cases (35 F; 273 NF)
** Significant at < 0.01 * Significant at ≤ 0.05

Dependent variable: disclosure/nondisclosure of a forecast
Coefficients = Multiplicative logistic regression estimates

Full statistical output for this table is shown in table A3.7 in appendix 3.

The explanatory power (pseudo R^2) of the model excluding substantial shareholdings (SSH) is lower (0.26) than that of the model including substantial shareholdings (0.35). There is very little difference in the goodness of fit statistic.

6.1.4 Disclosure by targets - multivariate analysis

In order to increase the number of cases analysed, the variable with the most missing values, percentage substantial shareholdings (SSH), was dropped from the model. This increased the number of cases for analysis from 382 to 530 (out of a maximum of 701 cases).

Model including substantial shareholdings (SSH) (Table 6.6)

Only two variables in the model are significant: bid horizon (BHOR) and type of bid (BID). As predicted, the probability of disclosure increases as bid horizon decreases and during contested bids.

Table 6.6 Logit estimation of model for targets - including SSH

Explanatory variables	Coeff.	Signif.	R
BHOR	0.33	0.02*	-0.10
BID	5.72	0.00**	0.32

-2 Log likelihood 360.24 Significance 0.75
Goodness of fit 360.42 Significance 0.75
Model chi-square 49.68 (d.f. 2) Significance 0.00
Pseudo R^2 0.12
Number of observations 382 cases (87 F; 295 NF)
** Significant at < 0.01 * Significant at ≤ 0.05

Dependent variable: disclosure/nondisclosure of a forecast
Coefficients = Multiplicative logistic regression estimates

Full statistical output for this table is shown in table A3.8 in appendix 3.

Table 6.7 Logit estimation of model for targets - excluding SSH

Explanatory variables	Coeff.	Signif.	R
BHOR	0.18	0.00**	-0.16
VAL	1.00	0.03*	0.07
BID	6.63	0.00**	0.32
IND (CAPGDS)	1.64	0.03*	0.06
IND (DURGDS)	0.84	0.56	0.00
IND (NONDUR)	1.18	0.43	0.00
IND (OTHER)	1.52	0.07	0.05

-2 Log likelihood 456.61 Significance 0.98
Goodness of fit 496.12 Significance 0.79
Model chi-square 105.43 (d.f. 7) Significance 0.00
Pseudo R^2 0.19
Number of observations 530 cases (118 F; 412 NF)
** Significant at < 0.01 * Significant at ≤ 0.05

Dependent variable: disclosure/nondisclosure of a forecast
Coefficients = Multiplicative logistic regression estimates
Full statistical output for this table is shown in table A3.9 in appendix 3.

Model excluding substantial shareholdings (Table 6.7)

In addition to the two variables significant in the previous model (bid horizon (BHOR) and type of bid (BID)), value of bid (VAL) and industry (IND) are also significant in this model. As predicted, the probability of disclosure increases as value of the bid increases. A forecast is significantly more likely in the capital goods industry.

The effect of type of bid (BID) on disclosure is substantial. The probability of disclosing a forecast is 5.72/6.63 times greater during a contested bid. Type of bid (BID) also contributes considerably more explanatory power (R) to the model than bid horizon (BHOR), value of bid (VAL) and industry (IND).

The exclusion of percentage substantial shareholdings (SSH) improves the explanatory power of the model (pseudo R^2) from 0.12 to 0.19 and improves the goodness of fit statistic from 0.75 to 0.79.

6.1.5 Summary of results for bidders and targets

The analysis in this section examined various influences on disclosure of profit forecasts to test hypothesises H_1-H_{14} outlined in chapter 3. Initially bivariate relationships were analysed, followed by multivariate logit analysis. As predicted by H_2, forecast disclosure is significantly greater for targets than for bidders (see table A3.1 in appendix 3 for details).

<u>Bivariate results - bidders</u>

Mann-Whitney U tests of the differences in mean rankings of continuous variables were examined. These tests showed that bidders' mean rankings differ significantly on bid horizon (BHOR), value of bid (VAL), turnover (REV) and percentage substantial shareholdings (SSH). The mean rankings for bid horizon (BHOR) and percentage substantial shareholdings (SSH) are significantly lower, and the mean rankings for value of bid (VAL) and turnover (REV) are significantly higher, for forecasting bidders. The frequency of disclosure is significantly greater during contested bids (BID), in bids where the purchase consideration is paper or mixed (cash and paper) (CON), and by listed (QUOTED) and UK bidders (NAT).

Thus, in the case of bidders, initial tests support the hypotheses that fewer forecasts are disclosed when the bid horizon is longer (H_5), that large bidders voluntarily disclose more forecasts (H_6) (subject to two of the four size variables tested not being significant) and that firms with larger percentage substantial shareholdings disclose fewer forecasts (H_9). In the case of bidders there is no support for the hypotheses that disclosure of forecasts is influenced by leverage (H_7) or by percentage management ownership (H_8).

Again, in the case of bidders, simple crosstabulations provide initial support for the hypotheses that more forecasts are disclosed during contested bids (H_2), in bids which include paper consideration (H_3), by quoted companies (H_{12}) and by UK listed companies (H_{14}). There is no support for the influence of year (H_1),

auditor/reporting accountant (H_{10}) and financial advisor (H_{11}). The null hypothesis of no industry influence, H_{13}, is supported.

Bivariate results - targets

Mann-Whitney U test mean rankings of targets differ significantly on all variables except number and percentage substantial shareholdings (NO.SSH/SSH). The mean rankings for bid horizon (BHOR) and percentage management ownership (MO) are significantly lower, and the mean rankings for value of bid (VAL), turnover (REV), total assets (TA1), owners' equity (TA2) and leverage (LEV) are significantly higher, for forecasting targets. The frequency of forecast disclosure by targets is significantly greater during contested bids (BID), and where big-six auditors (AUD) and higher reputation firms of financial advisors (MB) are involved in the bid. The industry profile (IND) for target company forecasters and nonforecasters is also significantly different.

Thus, in the case of targets, initial tests support the hypotheses that fewer forecasts are disclosed when the bid horizon is longer (H_5) and that larger (H_6), higher leveraged (H_7) targets with lower percentage management ownership (H_8) disclose more forecasts. In the case of targets, there is no support for the hypothesis that disclosure of forecasts is influenced by percentage substantial shareholdings (H_9). There is initial support for the hypotheses that more forecasts are disclosed during contested bids (H_3) and where big-six firms of auditors (H_{10}) and higher reputation firms of financial advisors (H_{11}) are involved in the takeover. The null hypothesis that industry has no effect on disclosure of forecasts (H_{13}) is not supported.

Multivariate logit results

Two variables are significant in all logit models: bid horizon (BHOR) and type of bid (BID). The probability of disclosure of a forecast is greater, for both bidders and targets, where bid horizon is shorter and in contested bids. Bid horizon is more influential for bidders than for targets; type of bid is more influential for targets than for bidders.

For bidders, year (YEAR) is significant in the model including substantial shareholdings (SSH). In the model excluding substantial shareholdings (SSH) value of bid (VAL) and purchase consideration (CON) are also significant. For targets, value of bid (VAL) and industry (IND) are significant in the model excluding substantial shareholdings (SSH).

Table 6.8 Summary of Spearman correlations between size variables

Relationship	Bidders Correlation	Targets Correlation
TA1-TA2	0.71**	0.98**
VAL-TA1	0.53**	0.82**
VAL-TA2	0.52**	0.81**
VAL-REV	0.45**	0.73**
REV-TA1	0.76**	0.70**
REV-TA2	0.71**	0.68**

** Significant at < 0.01
Full statistical output for this table is shown in tables A3.3 and A3.4 in appendix 3.

Table 6.9 Analysis to explain anomalous results on size variables

Model	Bidders No. cases	Bidders Significant variables	Targets No. cases	Targets Significant variables
Including SSH				
All variables	181	BHOR, YEAR, BID	375	BHOR, BID
Excluding TA2	181	BHOR, YEAR, BID	375	BHOR, BID
Excluding LEV	181	BHOR, YEAR, BID	379	BHOR, BID
Only one size variable: VAL	186	BHOR, YEAR, BID	382	BHOR, BID
Only one size variable: REV	182	BHOR, YEAR, BID	376	BHOR, BID
Only one size variable: TA1	184	BHOR, YEAR, BID	383	BHOR, BID
Only one size variable: TA2	185	BHOR, YEAR, BID	383	BHOR, TA2, BID
Excluding size	186	BHOR, YEAR, BID	383	BHOR, BID
Excluding SSH				
All variables	302	BHOR, VAL,YEAR, BID, CON	523	BHOR, TA2, BID, IND
Excluding TA2	302	BHOR, VAL,YEAR, BID, CON	523	BHOR, BID, IND
Excluding LEV	302	BHOR, VAL,YEAR, BID, CON	527	BHOR, TA2, BID, IND
Only one size variable: VAL	308	BHOR, VAL,YEAR, BID, CON	530	BHOR, VAL, BID, IND
Only one size variable: REV	303	BHOR, YEAR, BID, CON	524	BHOR, BID, IND
Only one size variable: TA1	306	BHOR, YEAR, BID, CON	531	BHOR, TA1, BID, IND
Only one size variable: TA2	307	BHOR, YEAR, BID, CON	531	BHOR, TA2, BID, IND
Excluding size	308	BHOR, YEAR, BID, CON	531	BHOR, BID, IND

The results for the size variables are anomalous. The four size variables, value of bid (VAL), turnover (REV), total assets (TA1) and owners' equity (TA2) are expected to be similar. However, results vary depending on which size variable is included in the model. Bivariate Spearman correlations between size variables, summarised in table 6.8, show almost identical(targets)/close(bidders) correlations for total assets (TA1) and owners' equity (TA2).

To try to explain the anomalous results on the size variables, logit models of various combinations of variables were analysed. The results are reported in table 6.9. Firstly, owners' equity (TA2) was excluded. Then leverage (LEV) was excluded. This is because the difference between owners' equity (TA2) and total assets (TA1) is debt and, therefore, the anomalous findings may be related to leverage (LEV). Next, each of the four size variables was included individually in the model. Finally, no size variable was included.

For bidders, only one size variable, value of bid (VAL), is significant and only in some models (for this reason, as stated earlier, the reported results are based on value of bid (VAL)). For targets, value of bid (VAL), total assets (TA1) and owners' equity (TA2) are included in some models.

These analyses do not explain why some size variables were significant when others were not. Excluding leverage did not change the results. Generally the results were not affected when size variables were excluded, although total assets (TA1) and value of bid (VAL) were significant in some cases. Thus, in conclusion, there seems to be no obvious explanation for the anomalous results on size.

6.1.6 Differences in disclosure between bidders and targets

Target firms are significantly more likely to disclose a forecast. The frequency of voluntary forecast disclosure by targets (141 - 20%) is significantly greater than by bidders (47 - 7%). This is not surprising. If the bidder is offering cash, there is little advantage in making a forecast. There were 338 cash bids (48%) in the

research. As one interviewee stated (comment 21) '*There is no negative PR about the share price in an uncontested bid so it is less likely the bidder will have to make a forecast*'. Interviews with advisors suggest that the benefits of disclosure are much greater for targets. Bidding companies will have less need to communicate results to shareholders as they control the timing of the bid and are more likely to make a bid when market conditions are favourable to them.

Table 6.10 Summary results of bivariate and multivariate analysis for bidders and targets

	Bivariate analysis		Logit analysis			
	Bidders	Targets	Bidders		Targets	
			Including SSH 186 cases	Excluding SSH 308 cases	Including SSH 382 cases	Excluding SSH 530 cases
YEAR			*	*		
BID	*	**	**	*	**	**
CON	**			*		
BHOR	**	**	**	**	*	**
VAL	**	**		*		
REV	*	**				
TA1		**				
TA2		**				*
LEV		**				
MO		**				
SSH	*					
AUD		*				
MB		**				
QUOTED	**	N/A				
IND		*				*
NAT	**					

** Significant at < 0.01 * Significant at ≤ 0.05
Full statistical output for this table is shown in tables 6.1, 6.2 and 6.4 to 6.7

Table 6.10 compares the results of bivariate and multivariate analysis of variables for bidders and targets. Bid horizon (BHOR) and type of bid (BID) are significant for both bidders and targets in all analysis performed. As with the initial bivariate analysis, multivariate analysis shows the dominance of the takeover-context of the research. For bidders, two other takeover-context variables, year and purchase consideration, were significant in one model.

Bid horizon is more influential for bidders than for targets; type of bid is more influential for targets than for bidders. This is not surprising. Bidders have greater discretion in disclosing forecasts compared with targets which are under much more pressure during a bid, especially contested bids. Bidders will disclose forecasts if the circumstances are conducive to disclosure. Whether conditions are conducive is likely to be related to length of bid horizon. Longer bid horizons are likely to be considered adverse to forecast disclosure by bidders especially,

The finding in all models that bid horizon is significantly shorter for forecasters is to be expected. The closer the bid date to the forecast period end, the less risk of getting the forecast wrong. If the bid date is very close to the year end (in 86 cases (15%), out of 571 readings, bid horizon was after the year end) there is probably less work and management time necessary to bring out a forecast.

For bidders (in addition to bid horizon (BHOR) and type of bid (BID)), bivariate analysis shows that size (only two (VAL and REV) of the four variables), percentage substantial shareholdings (SSH), purchase consideration (CON), listing status (QUOTED) and nationality (NAT) are significantly related to disclosure of forecasts. Only year (YEAR), value of bid (VAL) and purchase consideration (CON) are significant in multivariate logit analysis.

For targets (in addition to bid horizon (BHOR) and type of bid (BID)), bivariate analysis shows that size (all four (VAL, REV, TA1, TA2) measures thereof), leverage (LEV), percentage management ownership (MO), auditor/reporting accountant (AUD), financial advisor (MB) and industry (IND) are related to disclosure of forecasts. Only size (VAL) and industry (IND) are significant in the logit model.

Table 6.10 highlights the discrepancy in findings between bivariate analysis and multivariate analysis. It is difficult to explain this discrepancy. The Spearman correlations between the independent variables for bidders and targets (in tables A3.3 and A3.4 in appendix 3) do not suggest that there are very high correlations

that would explain why variables significant in bivariate analysis are not in multivariate analysis.

In summary, the comparison of disclosure by bidders and targets reveals the following:

- Bivariate analysis indicates that forecast disclosure is generally related to firm-specific variables for targets but not for bidders;
- Purchase consideration is an important influence on disclosure for bidders.

6.1.7 Disclosure in agreed and contested bids

The preceding analysis has focused on bidders and targets. Analysis between agreed and contested bids follows. To avoid data overload, bivariate analysis was not performed (nor was it considered necessary). A forecast is significantly more likely in contested bids. There were 99 (18%) voluntary forecasts in 542 agreed bids and 89 (56%) forecasts in 159 contested bids.

Table 6.11 Logit estimation of model for agreed bids - including SSH

Explanatory variables	Coeff.	Signif.	R
BHOR	0.05	0.00**	-0.27
VAL	1.00	0.01*	0.13

-2 Log likelihood 273.47 Significance 1.00
Goodness of fit 383.32 Significance 0.91
Model chi-square 38.16 (d.f. 2) Significance 0.00
Pseudo R^2 0.12
Number of observations 424 cases (51 F; 373 NF)
** Significant at < 0.01 * Significant at ≤ 0.05

Dependent variable: disclosure/nondisclosure of a forecast
Coefficients = Multiplicative logistic regression estimates

Full statistical output for this table is shown in table A3.10 in appendix 3.

6.1.8 Disclosure in agreed bids - multivariate analysis

There were 542 agreed bids, comprising 1,084 bidders and targets. Out of 1,084 firms, 424 were available for analysis when substantial shareholdings (SSH) was included in the model, which increased to 626 when substantial shareholdings (SSH) was excluded.

Table 6.12 Logit estimation of model for agreed bids - excluding SSH

Explanatory variables	Coeff.	Signif.	R
BHOR	0.05	0.00**	-0.30
VAL	1.00	0.01*	0.11

-2 Log likelihood 394.30 Significance 1.00
Goodness of fit 583.17 Significance 0.87
Model chi-square 52.51 (d.f. 2) Significance 0.00
Pseudo R^2 0.12
Number of observations 626 cases (72 F; 554 NF)
** Significant at < 0.01 * Significant at ≤ 0.05

Dependent variable: disclosure/nondisclosure of a forecast
Coefficients = Multiplicative logistic regression estimates

Full statistical output for this table is shown in table A3.11 in appendix 3.

Agreed bids - model including substantial shareholdings (SSH) (Table 6.11)

Table 6.11 shows two variables to be significant in determining disclosure of forecasts in agreed bids - bid horizon (BHOR) and value of bid (VAL). Disclosure is significantly more likely the shorter the bid horizon and for larger firms.

Agreed bids - model excluding substantial shareholdings (SSH) (Table 6.12)

The results in table 6.12 are similar to those in table 6.11.

In both models, bid horizon (BHOR) had considerably more explanatory power (R) than value of bid (VAL). The effect of bid horizon (BHOR) on probability of forecast disclosure is much smaller than for value of bid (VAL) (as indicated by multiplicative coefficients).

6.1.9 Disclosure in contested bids - multivariate analysis

There are 159 contested bids, comprising 318 bidders and targets. Out of 318 firms, 144 are available for analysis when substantial shareholdings (SSH) is included in the model. When substantial shareholdings (SSH) is excluded, the number of cases increases to 212.

Contested bids - model including substantial shareholdings (SSH) (Table 6.13)

Table 6.13 shows that only one variable, whether the firm is bidder or target, is related to disclosure in contested bids. Targets are significantly more likely to disclose forecasts in contested bids.

Table 6.13 Logit estimation of model for contested bids - including SSH

Explanatory variables	Coeff.	Signif.	R
BT	2.99	0.01*	0.16

-2 Log likelihood 186.41 Significance 0.01
Goodness of fit 144.00 Significance 0.44
Model chi-square 7.74 (d.f. 1) Significance 0.00
Pseudo R^2 0.04
Number of observations 144 cases (58 F; 86 NF)
** Significant at < 0.01 * Significant at ≤ 0.05

Dependent variable: disclosure/nondisclosure of a forecast
Coefficients = Multiplicative logistic regression estimates

Full statistical output for this table is shown in table A3.12 in appendix 3.

Contested bids - model excluding substantial shareholdings (SSH) (Table 6.14)

The results in table 6.14 are similar to those in table 6.13.

6.1.10 Summary of results for agreed and contested bids

Logit results

The factors related to disclosure of forecasts are very different for contested and agreed bids. In agreed bids a forecast is more likely the shorter the bid horizon and for larger bids. In contested bids, forecasting by targets is the dominant factor.

Table 6.14 Logit estimation of model for contested bids - excluding SSH

Explanatory variables	Coeff.	Signif.	R
BT	4.38	0.00**	0.25

-2 Log likelihood 259.22 Significance 0.01
Goodness of fit 211.99 Significance 0.45
Model chi-square 22.74 (d.f. 1) Significance 0.00
Pseudo R^2 0.08
Number of observations 212 cases (81 F; 131 NF)
** Significant at < 0.01 * Significant at ≤ 0.05

Dependent variable: disclosure/nondisclosure of a forecast
Coefficients = Multiplicative logistic regression estimates

Full statistical output for this table is shown in table A3.13 in appendix 3.

Table 6.15 Summary results of logit analysis of agreed and contested bids

	Agreed bids		Contested bids	
	Including SSH 424 cases	Excluding SSH 626 cases	Including SSH 144 cases	Excluding SSH 212 cases
YEAR				
BT			*	**
CON				
BHOR	**	**		
VAL	*	*		
REV				
TA1				
TA2				
LEV				
MO				
SSH				
AUD				
MB				
QUOTED				
IND				
NAT				

** Significant at < 0.01 * Significant at ≤ 0.05
Full statistical output for this table is shown in tables 6.11 to 6.14

6.1.11 Differences in disclosure between agreed and contested bids

A forecast is significantly more likely in contested bids. There were 99 (18%) voluntary forecasts in 542 agreed bids and 89 (56%) forecasts in 159 contested bids. Table 6.15 compares the results of agreed and contested bids. The factors influencing disclosure of profit forecasts are very different. Bid horizon and value of bid influence disclosure in agreed bids. In contested bids, whether the firm is a target is the single dominant influence.

In agreed bids, forecasts are probably disclosed by bidders and targets to increase the likelihood of the bid succeeding: of the bid being accepted by target shareholders (and possibly bidder shareholders where paper is issued). However, if the circumstances prevailing at the time of the bid are not conducive to a forecast, other methods of persuading shareholders to accept the bid are likely. Long bid horizons are not conducive to forecast disclosure. Thus, it is not surprising that this variable is related to forecast disclosure in agreed bids.

There were 17 bidder forecasters (out of 47 - 36%) and 72 target forecasters (out of 141 - 51%) in contested bids. In contested bids, it was expected that a relationship would be found between forecast disclosure and target (rather than bidder) firms. However the strength of the finding is surprising - that it was the single and main influence on disclosure.

6.2 Influence of market expectations on disclosure (H_{15})

This section examines the hypothesis that, where market expectations are out of line with current management estimates of profitability, firms are more likely to disclose a forecast. Deviation from market expectations is the difference between consensus analyst forecasts at the date of the bid and actual results. As explained in chapter 4, only 261 readings are available for deviation from market expectations (ME). The variable has been analysed between positive and negative deviations. Descriptive statistics for market expectations in table 4.13 show that the means for positive (POSME) and negative (NEGME) deviations do not

appear dissimilar. The value of deviation from market expectations (ME) is not very different from zero.

Table 6.16 analyses deviations from market expectations (ME) for bidders and targets between forecasters and nonforecasters. Significantly more targets (for which there is a reading for market expectations) made a forecast. Twenty-two targets (out of 49 - 45%) made a forecast compared with 23 bidders (out of 212 - 11%).

As expected, there is a higher incidence of forecast disclosure where actual results are greater than market expectations. A forecast is disclosed in 31 cases (out of 153 - 20%) with positive deviations from expectations (POSME) and in only 14 cases (out of 108 - 12%) with negative deviations (NEGME). However, chi-square statistics indicate that this difference in frequency is not significant.

Table 6.16 Analysis of deviation from market expectations variables

	Forecasters	Nonforecasters	Total
ME - Bidders	23 (51%)	189 (88%)	212 (81%)
ME - Targets	22 (49%)	27 (12%)	49 (19%)
	45 (100%)	216 (100%)	261 (100%)
Pearson chi-square 32.34 (d.f. 1) Significance 0.00			
POSME	31 (69%)	122 (56%)	153 (59%)
NEGME	14 (31%)	94 (44%)	108 (41%)
	45 (100%)	216 (100%)	261 (100%)
Pearson chi-square 2.36 (d.f. 1) Significance 0.12			

Mann-Whitney U test results in table 6.17 show that the mean rankings of differences in deviation from market expectations (ME) and of the positive subsample (POSME) are significantly different for forecasters and nonforecasters. As predicted, for deviation from market expectations (ME) and for positive deviations (POSME), mean rankings are significantly higher where a forecast was disclosed. There is no difference in mean rankings for the negative deviations (NEGME) subsample.

Table 6.17 Mann-Whitney test of differences in mean rankings between forecasters and nonforecasters for deviation from market expectations variables

	Mean rank			
	F	NF	*Z*-statistic	Two-tailed probability
ME	155	126	-2.30	0.02*
POSME	93	73	-2.21	0.03*
NEGME	52	55	-0.27	0.79

* Significant at ≤ 0.05

A logit model including deviation from market expectations (ME) is estimated. Because of the small number of readings for this variable, a single model is run including both bidders and targets. Deviation from market expectations is not significant (or even nearly significant) in the model. (Results are not shown in detail because they do not add anything to those shown earlier, other than to show that ME is not significant.)

Overall, these results provide evidence supporting the hypothesis that forecast disclosure is more likely when market expectations are out of line with actual results. The evidence also suggests that firms are more likely to disclose a forecast where market expectations are pessimistic and where actual results are greater than expectations.

These results must be interpreted with caution. The sample of 261 firms with a value for deviation from market expectations (ME) is dominated by bidders. The evidence in chapter 5 indicates that bidders are more likely to disclose bad news voluntarily than targets, particularly targets in contested bids. In addition, bidders tend to be larger. Larger firms, with PR departments, may be better at guiding market expectations through analysts' forecasts. Thus, market expectations are less likely to be out of line for bidders, who are less likely therefore to disclose a forecast. The evidence in table 6.16 for bidders and targets is consistent with this interpretation.

6.3 Effect of forecast on outcome of bids (H_{16}-H_{19})

This section tests a number of hypotheses on the strategic value of disclosing forecasts during takeover bids. The effect of disclosing forecasts on the outcome of bids is assessed. Outcome of bids is measured in two ways: whether the bid succeeded/failed or whether the offer price was increased/not increased.

As confirmed by the interviews, the relationship between success (however defined) and disclosure of forecasts is difficult to test. For example, in agreed bids the published bid price may not have increased. However, at an earlier stage, there may have been a price increase conditional on publication of a forecast prior to the bid being announced. It is impossible to test events occurring during the negotiation phase of bids using empirical research techniques. In contested bids it is difficult to know whether it is publication of a forecast, or some other event, that influences the outcome. It is also difficult to isolate the extent to which a price increase relates directly to the publication of a forecast.

6.3.1 Outcome of bids - bidders (H_{16}-H_{17})

This section examines whether successful bidders are more likely to have disclosed a forecast and whether disclosure of a forecast by bidders makes any difference to whether the offer price increases.

Table 6.18 analyses disclosure of forecasts by bidders and outcome of bids. There is no significant association between outcome of the bid, however defined, and forecast disclosure for bidders.

6.3.2 Outcome of bids - targets (H_{18}-H_{19})

This section tests whether successful defenders are more likely to have disclosed a forecast and whether an increase in offer price is more likely where the target has disclosed a forecast.

Table 6.19 analyses disclosure of forecasts by targets and outcome of bids. For agreed bids there is a significant positive association between disclosure of a

forecast and success of bid. This may be because some agreed bids fail before there is time to make a profit forecast.

There is no significant association between forecast disclosure and success/failure for contested bids. There is a significant association between disclosure of a forecast and increase in offer price for contested bids only.

Table 6.18 Analysis of outcome of bids by forecast disclosure - bidders

	Agreed		Contested		
	Successful	**Failed**	**Successful**	**Failed**	**Total**
No forecast	473 (94%)	39 (95%)	72 (91%)	70 (87%)	654 (93%)
Forecast	28 (6%)	2 (5%)	7 (9%)	10 (13%)	47 (7%)
	501 (100%)	41 (100%)	79 (100%)	80 (100%)	701 (100%)
	Pearson chi-square 0.04		Pearson chi-square 0.55		
	(d.f. 1) Significance 0.85		(d.f. 1) Significance 0.46		
	Increased offer	**No increase**	**Increased offer**	**No increase**	**Total**
No forecast	12 (92%)	500 (94%)	38 (90%)	104 (89%)	654 (93%)
Forecast	1 (8%)	29 (6%)	4 (10%)	13 (11%)	47 (7%)
	13 (100%)	529 (100%)	42 (100%)	117 (100%)	701 (100%)
	Pearson chi-square 0.12		Pearson chi-square 0.08		
	(d.f. 1) Significance 0.73		(d.f. 1) Significance 0.78		

Table 6.19 Analysis of outcome of bids by forecast disclosure - targets

	Agreed		Contested		
	Successful	**Failed**	**Successful**	**Failed**	**Total**
No forecast	433 (86%)	40 (98%)	46 (58%)	41 (51%)	560 (80%)
Forecast	68 (14%)	1 (2%)	33 (42%)	39 (49%)	141 (20%)
	501 (100%)	41 (100%)	79 (100%)	80 (100%)	701 (100%)
	Pearson chi-square 4.23		Pearson chi-square 0.78		
	(d.f. 1) Significance 0.04		(d.f. 1) Significance 0.38		
	Increased offer	**No increase**	**Increased offer**	**No increase**	**Total**
No forecast	11 (85%)	462 (87%)	14 (33%)	73 (62%)	560 (80%)
Forecast	2 (15%)	67 (13%)	28 (67%)	44 (38%)	141 (20%)
	13 (100%)	529 (100%)	42 (100%)	117 (100%)	701 (100%)
	Pearson chi-square 0.08		Pearson chi-square 10.53		
	(d.f. 1) Significance 0.77		(d.f. 1) Significance 0.00		

6.4 Discussion of chapter results and conclusions

This chapter set out to examine three research issues. The results are summarised below.

Influences on disclosure of forecasts - bidders and targets

Targets disclosed significantly more forecasts than bidders. All variables were variously significantly related to disclosure of forecasts in bivariate analysis. This confirms the prior expectation that the variables selected for testing would all be related to forecast disclosure. In multivariate analysis, two variables accounted for almost all influences on disclosure of forecasts for both bidders and targets: bid horizon and type of bid. In support of H_3 and H_5, significantly more forecasts were disclosed the shorter the bid horizon and during contested bids.

For bidders, there was evidence, in support of H_1 and H_4, that year of the forecast and purchase consideration influenced disclosure. More forecasts were disclosed in the earlier years of the study and during bids that included paper consideration.

For targets, there was evidence, in support of H_6, that size was a significant influence on disclosure of a forecast. This result is somewhat anomalous as only one of the four size variables, owners' equity, was significant and in only one of the two models estimated for targets. No explanation for this anomalous result could be found.

Influences on disclosure of forecasts - agreed and contested bids

The factors influencing disclosure of forecasts were very different in agreed bids compared with contested bids. In agreed bids, significantly more forecasts were disclosed the shorter the bid horizon (H_3) and in earlier years of the study (H_1). In contested bids whether the firm was a target (H_2) was the dominant determinant of forecast disclosure. Industry (H_{13}), and to a lesser extent size (H_6) (as measured by total assets only), were significant.

Influence of market expectations on disclosure of forecasts

The hypothesis that forecasts are more likely to be disclosed when market expectations are out of line with results was supported. This result appeared to be driven by over pessimistic market expectations, where subsequent actual results were greater than expectations. This supports the belief that forecasts are more likely when there is good news to disclose.

These results must be interpreted with caution for two reasons. Firstly, there were limited data available on market expectations so the number of cases analysed was only 261. This small sample is dominated by bidders, so the results may be dominated by motivations of bidders.

Strategic value of forecasts

There is some evidence that forecasts have strategic value for targets, but there is no such evidence for bidders. Disclosure of forecasts in contested bids was significantly related to increased offer price. Consistent with previous studies, disclosure of a forecast had no effect on success or failure of contested bids.

Chapter 7: FACTORS INFLUENCING DISCLOSURES IN FORECASTS: CONTENT ANALYSIS

This chapter analyses the factors influencing content of disclosures in forecasts and the news content of forecasts disclosed. In all, 250 forecasts are analysed.

Five research issues were identified in chapter 1, two of which are dealt with in this chapter. Chapter 3 outlined the development of hypotheses to test these two research issues as follows:

- Does disclosure content of forecasts vary with external factors? (H_{20}-H_{33})
- Do the forecasts disclosed have identifiable news content characteristics? (H_{34})

7.1 Characteristics of forecasts and forecasters

Table 7.1 summarises the characteristics of forecasts and forecasters.

In all, 250 forecasts were obtained - 61 made by bidders, 183 by targets and 6 other (either group forecasts of target and bidder, or forecasts by subsidiary companies - all were subsequently reclassified as bidder forecasts). There were 123 forecasts disclosed in agreed bids, 121 in contested bids and 6 during white knight bids (subsequently reclassified as agreed bid forecasts).

Nearly all (210 out of 250) forecasts were made voluntarily. In 27 cases, Stock Exchange rules required that a statement made by the company prior to the bid be formally reported on as a forecast. There are 13 forecasts which are repeats of forecasts made in previous bids. In almost all cases, the forecasts are annual, although there are a sizeable number of half year forecasts. In one case, the forecast is for a five year period.

A majority of forecast firms have big-six auditors/reporting accountants and have higher reputation financial advisors. Nearly all forecasters are UK public listed companies. There is a reasonable spread of forecasters between the five industry sectors of the study.

Table 7.1 Characteristics of forecasters and forecasts

Forecasts by	
Forecaster	
Bidder	67 (27%)
Target	183 (73%)
	250 (100%)
Type of bid	
Agreed bid	129 (52%)
Contested bid	121 (48%)
	250 (100%)
Circumstances of forecast	
Voluntary	210 (84%)
Involuntary/repeat	40 (16%)
	250 (100%)
Period of forecast	
> six months	225 (90%)
Six months or less	25 (10%)
	250 (100%)
Auditor/reporting accountant	
Big-six auditors	186 (75%)
Other auditors	62 (25%)
	248 (100%)
Missing values	2
	250
Financial advisor	
Higher reputation financial advisor	180 (73%)
Other financial advisor	68 (27%)
	248 (100%)
Missing values	2
	250
Listing status	
Quoted	237 (95%)
Unquoted	13 (5%)
	250 (100%)
Industry	
Capital goods	50 (23%)
Durable goods	29 (13%)
Non-durable goods	62 (29%)
Banks and financial	22 (10%)
Other	55 (25%)
	218 (100%)
Missing values	32
	250
Nationality	
UK companies	239 (96%)
Irish and other companies	11 (4%)
	250 (100%)

Table 7.2 summarises the descriptive statistics of continuous variables relating to forecasting firms. The standard deviation of all, except percentage substantial shareholdings (SSH), is very high. All the size variables are highly positively skewed, as is leverage (LEV).

Forecast horizon (FHOR) is the number of days between the issuance of the forecast and the forecast period end date. A substantial number of forecasts were published after the forecast period end and only a small number were published more than six months before..

The number of assumptions disclosed (ASS) is greater than the number of items (ITEMS) disclosed. Both the mean and median for ASS are greater compared with ITEMS.

Table 7.2 Descriptive statistics of all forecast-related continuous variables

Variable	Mean	Median	Skew	Standard deviation	No.	Missing values	Total
Dependent variables							
ITEMS	3.64	3.00	1.36	3.24	250	0 (0%)	250
ASS	5.08	4.00	0.54	4.21	250	0 (0%)	250
Independent variables							
Takeover- context variables							
VAL	382	73	8.18	1063	249	1 (0%)	250
Forecast-related variables							
FHOR	59	31	6.95	144	250	0 (0%)	250
Firm-specific variables							
REV	567	106	9.21	2242	238	12 (5%)	250
TA1	301	44	12.00	1348	245	5 (2%)	250
TA2	203	32	10.44	671	249	1 (0%)	250
LEV	0.34	0.22	14.76	1.29	244	6 (2%)	250
MO	14.48	3.10	1.62	20.65	233	17 (7%)	250
SSH	0.28	0.25	0.70	0.16	156	94 (38%)	250

Bivariate Spearman correlations between all independent variables for forecasters are shown in table A3.5. The highest correlations (down to 0.40) are summarised in table 7.3 - the top six relate to correlations between the four size variables (which are included in the regression models alternately). The highest correlations among other independent variables varied between -0.64 and -0.55 for

management ownership (MO) and the four size variables (VAL, REV, TA1, TA2), and 0.43 for financial advisor (MB) and two size variables (TA1 and TA2). Thus, except for the size variables, there are few highly correlated independent variables in the sample of forecasters, and high correlations are absent from the data. In any event, high correlations between the independent variables are not a problem for the multivariate statistical technique (negative binomial regression) used to analyse content of disclosures in forecasts.

Table 7.3 Summary of highest bivariate Spearman correlations between independent variables for forecasters

Relationship	Correlation
TA1-TA2	0.98**
REV-TA2	0.81**
REV-TA1	0.82**
VAL-REV	0.76**
VAL-TA2	0.85**
VAL-TA1	0.85**
MO-VAL	-0.56**
MO-REV	-0.55**
MO-TA1	-0.63**
MO-TA2	-0.64**
DCAPGDS-DFIN	-0.75**
MB-TA1	0.43**
MB-TA2	0.43**

** Significant at < 0.01
Full statistical output for this table is shown in table A3.4 in appendix 3.

7.2 Content analysis of forecasts

A comprehensive content analysis of the profit forecasts, including the wording used, is reported in the tables that follow. Types of and frequency of disclosure of items and of assumptions were shown in tables 4.15 and 4.16. Appendix 4 contains 72 examples taken from forecasts (or in some cases from takeover documents) as backup material to this content analysis of disclosures in forecasts.

As shown in table 7.4, most forecasts are quantified. Forecasts generally indicate a range of profits rather than a specific point forecast. Range forecasts use

wording such as *'forecast profit in excess of £X'* or forecast profit *'not less than £X'* and are summarised in table 7.5.

Table 7.4 Quantification of forecasts	
Not quantified	41 (16%)
Point forecasts	61 (24%)
Range forecasts	148 (60%)
	250 (100%)

Table 7.5 Wording used in range forecasts	
Profit will not be less than	111
Profit will be in the region of	10
Profit will be in excess of	11
Profit is unlikely to reach	3
Profit will be at least	2
Profit will not exceed	2
Loss will be not greater than	8
Loss will be greater than	1
	148

Table 7.6 Wording used in non-quantified forecasts	
Profit less than previous period	5
Profit greater than previous period	15
Profit not greater than previous period	1
Profit not different from previous period	1
Continued further growth	3
Loss forecast	9
Improvements in profit	1
Profit in line with stock market expectations	2
Return to profit	3
Wording not stated	1
	41

Table 7.6 summarises the wording used in non-quantified forecasts. Of the 41 non-quantified forecasts, 15 forecast poorer results than the previous period, 22 forecast better results and three forecast results not different from/in line with

expectations. Most non-quantified forecasts (23 - 56%) are made involuntarily under the rules of the Takeover Code.

7.3 Multivariate results

Three multivariate techniques were applied to analyse the dependent variables, number of items (ITEMS) and number of assumptions (ASS) disclosed. The three statistical techniques were: OLS regression, Poisson regression and negative binomial regression. All gave similar (but not exactly the same) results. As explained in chapter 4, negative binomial regression is the most appropriate technique, given the dependent variables. In addition, in all negative binomial models the alternative Poisson specification is rejected by likelihood ratio tests. Consequently, negative binomial results are reported in tables 7.7 and 7.10 to follow and in tables A3.14 to A3.21 in appendix 3.

The tables report three tests to determine whether the fitted negative binomial model is adequate and well specified: goodness of fit - chi-square test, pseudo R^2 and likelihood ratio test. The likelihood ratio test compares the unrestricted negative binomial model with the restricted Poisson model.

Substantial shareholdings (SSH) has a large number of missing values. When this variable is included, 141/144 cases are available for analysis (depending on the size variable); 205/209 cases are available for analysis when the variable is excluded.

Models are run including only one of the four size variables. The results are similar regardless of size variable used. The reported results use turnover (REV) as the size variable.

7.3.1 Items disclosed in forecasts

Tables 7.7 and 7.8 report negative binomial model results, where the dependent variable is number of items disclosed (ITEMS). Four explanatory variables are significant in both models: type of bid (BID), circumstances of making the

forecast (CIRC), period forecast (PER) and forecast horizon (FHOR). Significantly more items were disclosed during contested bids, in voluntary forecasts, and in longer period, shorter horizon forecasts (contrary to expectations). In the model excluding substantial shareholdings, forecaster (BT), percentage management ownership, auditor/reporting accountant (AUD) and financial advisor (MB) are significant. More items are disclosed by targets, where percentage management ownership is lower and where big-six auditors and higher reputation financial advisors are involved in the bid.

Table 7.7 Negative binomial model results - dependent variable ITEMS - including SSH

Size variable REV (all size variables give similar results)
Number of observations 141 forecasts
Log-likelihood -291.89
Pearson chi-square goodness of fit (123 d.f.) 229.71 Significance 0.00
Pseudo R^2 0.92
Likelihood ratio test 18.48 Chi-square (d.f. 1) 36.96 Significance 0.00

	Regression coefficients	Std.error of coefficient	t statistic	p value
Intercept	-0.76E-02	0.50	-0.02	0.99
BID	0.48	0.17	2.84	0.01*
BT	0.22	0.20	1.08	0.28
CIRC	-1.31	0.22	-6.02	0.00**
PER	1.00	0.36	2.74	0.01*
FHOR	-0.95E-03	0.39E-03	-2.36	0.01*
REV	-0.89E-04	0.18E-03	-0.48	0.63
LEV	-0.44	0.39	-1.12	0.26
MO	-0.72E-02	0.64E-02	-1.13	0.26
SSH	-0.29	0.41	-0.71	0.48
MB	0.17	0.19	0.90	0.37
AUD	0.11	0.19	0.61	0.54
DCAPGDS	-0.01	0.32	0.37	0.97
DDURGDS	-0.15	0.35	-0.43	0.67
DNONDUR	0.01	0.33	0.03	0.97
DOTHER	-0.31	0.30	1.03	0.30
NAT	-0.05	0.51	-0.10	0.92

Only one case was unquoted, so QUOTED was not analysed by the program

Table 7.8 Negative binomial model results - dependent variable ITEMS - excluding SSH

Size variable REV (all size variables give similar results)
Number of observations 205 forecasts
Log-likelihood -442.32
Pearson chi-square goodness of fit (188 d.f.) 464.14 Significance 0.00
Pseudo R^2 0.93
Likelihood ratio test 69.88 Chi-square (d.f. 1) 139.76 Significance 0.00

	Regression coefficients	Std.error of coefficient	t statistic	p value
Intercept	0.21	0.22	0.97	0.33
BID	0.51	0.08	6.67	0.00**
BT	0.28	0.10	2.80	0.01*
CIRC	-0.89	0.08	-10.80	0.00**
PER	1.42	0.09	4.90	0.00**
FHOR	-0.68E-03	0.24E-03	-2.81	0.01*
REV	-0.10E-04	0.11E-04	0.90	0.37
LEV	-0.28	0.18	-1.57	0.12
MO	-0.83E-02	0.25E-02	-3.28	0.00**
MB	0.20	0.09	2.21	0.03*
AUD	0.16	0.07	2.25	0.03*
DCAPGDS	0.12	0.17	0.72	0.47
DDURGDS	-0.14	0.18	-0.75	0.45
DNONDUR	0.24	0.16	1.49	0.14
DOTHER	0.25	0.16	1.55	0.12
NAT	-0.36	0.43	-0.85	0.39

Only one case was unquoted, so QUOTED was not analysed by the program

7.3.2 Disclosure of assumptions

Tables 7.9 and 7.10 report negative binomial model results for the number of assumptions disclosed (ASS). Two variables are significant in both models: type of bid (BID) and forecast horizon (FHOR). More assumptions are disclosed in contested bid forecasts and in longer horizon forecasts. In addition, in the model including substantial shareholdings (SSH), circumstances of making the forecast (CIRC) and period forecast (PER) are significant. Significantly more assumptions are disclosed in voluntary forecasts and in longer period forecasts.

Table 7.9: Negative binomial model results - dependent variable ASS - including SSH

Size variable REV (all size variables give similar results)
Number of observations 141 forecasts
Log-likelihood -360.28
Pearson chi-square goodness of fit (123 d.f.) 462.48 Significance 0.00
Pseudo R^2 0.77
Likelihood ratio test 84.68 Chi-square (d.f. 1) 169.35 Significance 0.00

	Regression coefficients	Std.error of coefficient	t statistic	P value
Intercept	-0.03	0.53	-0.06	0.95
BID	0.42	0.19	2.20	0.03*
BT	0.37	0.24	1.55	0.12
CIRC	-0.54	0.21	-2.60	0.01*
PER	0.54	0.26	2.03	0.04*
FHOR	0.18E-02	0.37E-03	-4.97	0.00**
REV	-0.23E-03	0.23E-03	-1.00	0.32
LEV	-0.10	0.34	-0.28	0.78
MO	0.16E-02	0.65E-02	0.25	0.80
SSH	0.72	0.58	1.24	0.22
MB	0.89E-03	0.24	0.36E-02	0.99
AUD	0.29	0.21	1.39	0.17
DCAPGDS	0.02	0.28	0.06	0.95
DDURGDS	0.17	0.34	0.49	0.62
DNONDUR	0.22	0.26	0.85	0.39
DOTHER	0.19	0.27	0.70	0.48
NAT	0.06	0.77	0.07	0.94

Only one case was unquoted, so QUOTED was not analysed by the program

7.3.3 Summary of results of content analysis (H_{20}-H_{33})

Table 7.11 summarises the content analysis results. Type of bid and forecast horizon are significant in all models. However, forecast horizon is significant in opposite directions for number of items and number of assumptions disclosed.

Takeover-context variables (H_{20}-H_{21})

Forecaster (BT) is associated with the number of assumptions disclosed but not with the number of items. There is no difference between bidders and targets in the number of items disclosed. As predicted in H_{20}, targets disclose significantly more assumptions than bidders. The increased disclosure of assumptions by

targets may be due to increased fear of litigation by target company directors and their advisors. Target company advisors are most likely to be sued if litigation follows a takeover. The greater the number of assumptions the greater the protection offered to those associated with the forecast.

Table 7.10: Negative binomial model results - dependent variable ASS - excluding SSH

Size variable REV (all size variables give similar results)
Number of observations 205 forecasts
Log-likelihood -519.44
Pearson chi-square goodness of fit (188 d.f.) 4046.91 Significance 0.00
Pseudo R^2 0.83
Likelihood ratio test 177.06 Chi-square (d.f. 1) 354.12 Significance 0.00

	Regression coefficients	Std.error of coefficient	t statistic	P value
Intercept	-0.22	0.42	0.52	0.60
BID	0.36	0.17	2.17	0.03*
BT	0.32	0.20	1.61	0.11
CIRC	-0.32	0.17	-1.82	0.07
PER	0.37	0.22	1.71	0.09
FHOR	0.37E-02	0.51E-03	7.48	0.00**
REV	-0.56E-05	0.32E-04	-0.18	0.86
LEV	-0.11	0.33	0.34	0.73
MO	0.15E-02	0.47E-02	0.32	0.75
MB	-0.03	0.22	-0.16	0.88
AUD	0.21	0.17	1.26	0.20
DCAPGDS	0.14	0.26	0.55	0.59
DDURGDS	0.06	0.31	0.20	0.84
DNONDUR	0.23	0.25	0.91	0.36
DOTHER	0.24	0.25	0.96	0.34
NAT	-0.28	0.61	-0.45	0.65

Only one case was unquoted, so QUOTED was not analysed by the program

Type of bid (BID) is significant in the direction predicted by H_{21} in all models estimated. Significantly more items and significantly more assumptions are disclosed in contested bid forecasts. This is consistent with the competitive environment of contested bids. Forecasts may be attacked by the other side for inadequate disclosure, prompting greater disclosure of items. The greater chance of litigation arising from contested bids is likely to encourage those associated with forecasts (mainly advisors) to look for greater protection through the inclusion of more assumptions/caveats.

Table 7.11 Summary results of negative binomial regression of ITEMS and ASS

	ITEMS		ASS	
	Including SSH 141 F	Excluding SSH 205 F	Including SSH 141 F	Excluding SSH 205 F
BID	*	**	*	*
BT		*		
CIRC	**	**	*	
PER	*	**	*	
FHOR	*	*	**	**
REV				
LEV				
MO		**		
SSH				
AUD		*		
MB		*		
QUOTED				
IND				
NAT				

** Significant at < 0.01 * Significant at ≤ 0.05
Full statistical output for this table is shown in tables 7.7 to 7.10

In summary, the two takeover-context hypotheses, H_{20} and H_{21}, are supported by the research results.

Forecast-related variables (H_{22}-H_{24})

Circumstances of making the forecast (CIRC) is significant in three of the four models estimated (CIRC is significant at 7% in the fourth model). The number of items disclosed and the number of assumptions disclosed are significantly lower in involuntary forecasts. These results support H_{22} in the direction predicted. As involuntary forecasts are made reluctantly by management, it is to be expected that there will be fewer disclosures in such forecasts. The result is much weaker in the case of assumptions disclosed. A greater reluctance to disclose financial information, and at the same time a tendency to include caveats or assumptions in involuntary forecasts, is consistent with management reluctance to publish the forecast.

Forecast horizon (FHOR), hypothesis H_{23}, is supported in all models but in opposite directions for number of items disclosed (ITEMS) and number of assumptions disclosed (ASS). Fewer items, but more assumptions, were disclosed in longer horizon forecasts. This finding is as predicted for assumptions. The longer the forecast horizon the greater the uncertainty in the forecast. More caveats or assumptions in the forecast are expected the greater the uncertainty. Contrary to expectations, significantly fewer items are disclosed in longer horizon forecasts. This may be because forecasts disclosed after the forecast period end (estimates), with very short forecast horizons, are more in the nature of preliminary earnings announcements and therefore follow a fuller annual accounts type presentation.

Period of the forecast (PER) was significant in three of the four models estimated (it was significant at 9% in the fourth model). In support of H_5, significantly more items and assumptions are disclosed in longer period forecasts. Shorter period (six months or less) forecasts are expected to disclose less, in the same way that interim reports disclose less than annual reports. This finding is not as strong for assumptions disclosed compared with items disclosed, for similar reasons probably to involuntary forecasts just discussed.

In summary, the three hypotheses concerning forecast-related variables were supported in some or all of the regressions estimated.

Firm-specific variables (H_{25}-H_{33})

Firm-specific variables are significant in only one of the four models estimated. The number of items disclosed in the model excluding substantial shareholdings (SSH) is significantly related to percentage management ownership (MO), auditor/reporting accountant (AUD) and financial advisor (MB) in the directions predicted by H_{27}, H_{29} and H_{30}. Significantly more items are disclosed where the percentage management ownership is lower and where big-six auditors and higher reputation financial advisors are involved in the bid.

There is no support for H_{25} (size), H_{26} (leverage), H_{28} (substantial shareholdings), H_{32} (industry) and H_{33} (nationality). H_{31} (listing status) could not be tested as there were so few unquoted forecasters.

7.3.4 Content analysis of agreed bid and contested bid forecasts

There are 129 agreed bid forecasts and 121 contested bid forecasts. Depending on whether substantial shareholdings (SSH) are included in the model, 62/94 agreed bid forecasts and 79/111 contested bid forecasts are available for analysis.

In order to avoid information overload in this chapter, the eight tables analysing content of disclosures in agreed bid and contested bid forecasts are included in tables A3.14 to A3.21 in appendix 3. Tables 7.12 and 7.13 summarise the results.

<u>Agreed bids (tables A3.14 to A3.17)</u>

Circumstances of the forecast (CIRC) and forecast horizon (FHOR) are significantly related to the number of items disclosed in agreed bid forecasts. Significantly more items are disclosed in voluntary and in shorter horizon agreed bid forecasts. Size (REV) is also significant in the model excluding substantial shareholdings. Significantly more items are disclosed by larger firms forecasting in agreed bids.

Forecast horizon (FHOR) is significantly related to number of assumptions disclosed. Significantly more assumptions are disclosed in longer forecast horizons. Industry (IND) is significant in the model including substantial shareholdings and size (REV) is significant in the model excluding substantial shareholdings. The direction of the finding of a relationship between size (REV) and disclosure of assumptions in agreed bids is contrary to expectations. Significantly fewer assumptions are disclosed in larger company forecasts (for one model only). It is hard to find an explanation for this contrary finding.

Contested bids (tables A3.18 to A3.21)

Circumstances of making the forecast (CIRC) and period forecast (PER) are significant in both models of number of items disclosed. Significantly more items are disclosed in voluntary and in longer period contested bid forecasts. Forecast horizon and substantial shareholdings are significant in the model including substantial shareholdings. Significantly more items are disclosed in shorter horizon contested bid forecasts and where substantial shareholdings are lower.

In contested bids, the number of assumptions disclosed is significantly related to the forecaster (BT), circumstances of the forecast (CIRC), period forecast (PER), and industry (IND). Significantly more assumptions are disclosed by targets, in voluntary forecasts and in longer period forecasts. In the model excluding substantial shareholdings, forecast horizon is also significant. More assumptions are disclosed in longer horizon contested bid forecasts.

7.3.5 Comparison of content analysis for agreed and contested bids

The content analysis of agreed bid and contested bid forecasts is summarised for ITEMS and ASS in tables 7.12 and 7.13.

Number of items disclosed (Table 7.12)

Circumstances of the forecast (CIRC) is significant in all models for number of items disclosed. Forecast horizon (FHOR) is significant in three of the four models estimated. Period forecast (PER) is significantly related to number of items disclosed for contested bids only. The number of items disclosed is significantly greater in voluntary forecasts, in shorter horizon forecasts and in longer period forecasts (in contested bids). Turnover (REV) and percentage substantial shareholdings (SSH) are significant in only one model. There is some evidence that larger firms, with lower percentage substantial shareholdings, disclose more items in forecasts.

Number of assumptions disclosed (Table 7.13)

The factors influencing disclosure of assumptions in forecasts are very different between agreed bid and contested bid forecasts. Forecast horizon (FHOR) is the dominant influence and is significant in three of the four models estimated. In agreed bid forecasts, turnover (REV) and industry (IND) are also significant. More assumptions are disclosed in longer horizon forecasts and by larger forecasters. In contested bid forecasts, the number of assumptions disclosed is significantly related to the forecaster (BT), the circumstances of the forecast (CIRC), the period forecast (PER) and industry (IND). Forecast horizon (FHOR) is significant in one of the two contested bid models. The number of assumptions disclosed is significantly greater by targets, in voluntary forecasts, in longer period forecasts and in longer horizon forecasts (for one model only).

Table 7.12 Summary results of content analysis - ITEMS for agreed and contested bids

	Agreed bids		Contested bids	
	Including SSH 62 cases	Excluding SSH 94 cases	Including SSH 79 cases	Excluding SSH 111 cases
BT				
CIRC	**	**	**	**
PER			**	*
FHOR	*	*	**	
REV		**		
LEV				
MO				
SSH			*	
AUD				
MB				
QUOTED				
IND				
NAT				

** Significant at < 0.01 * Significant at ≤ 0.05
Full statistical output for this table is shown in tables A3.14, A3.15, A3.18 and A3.19

Table 7.13 Summary results of content analysis - ASS for agreed and contested bids

	Agreed bids		Contested bids	
	Including SSH 62 cases	Excluding SSH 94 cases	Including SSH 79 cases	Excluding SSH 111 cases
BT			**	*
CIRC			**	**
PER			*	**
FHOR	**	**		**
REV		*		
LEV				
MO				
SSH				
AUD				
MB				
QUOTED				
IND	*		*	**
NAT				

** Significant at < 0.01 * Significant at ≤ 0.05
Full statistical output for this table is shown in tables A3.16, A3.17, A3.20 and A3.21

7.4 News in forecasts (H_{34})

News in forecasts is measured by two variables. News in the forecast (NEWS) is the difference between the forecast and previous year's actual results. Forecast deviation (FD) is the difference between forecast results and market expectations (as measured by consensus analysts' forecasts from *The Earnings Guide*). Hypothesis H_{34} predicts that more good news forecasts will be disclosed - that the news in the forecast (NEWS) will be positive and that forecast deviation from market expectations (FD) will be positive.

Out of 209 quantified forecasts, the news (NEWS) variable is only calculable in 153 (73%) and the forecast deviation (FD) variable in 117 (56%) cases. Table 4.23 reported descriptive statistics for the news content variables. The good news variables (GOODNEWS/POSFD) are not dissimilar to the bad news variables (BADNEWS/NEGFD). As one would expect, the mean of forecast deviations is close to zero and the mean of news in the forecasts is positive.

Both variables are analysed between good/bad or positive/negative depending on whether the difference between the forecast results and previous year's actual results/analysts' forecasts is positive or negative. Out of a total of 153 readings for news in the forecasts (NEWS), only 30 (20%) are classified as bad news. Out of a total of 117 readings for forecast deviation (FD), only 48 (42%) are classified as negative deviations. Thus, as predicted in H_{34}, there were more good news/positive deviations than bad news/negative deviations forecasts.

Table 7.14 Data availability for news and forecast deviation variables

	Bidders	Targets	Total
GOODNEWS	34 (97%)	89 (75%)	123 (80%)
BADNEWS	1 (3%)	29 (25%)	30 (20%)
NEWS	35 (100%)	118 (100%)	153 (100%)
Pearson chi-square 8.08 (d.f. 1) Significance 0.00			
POSFD	18 (64%)	51 (57%)	69 (59%)
NEGFD	10 (36%)	38 (43%)	48 (41%)
FD	28 (100%)	89 (100%)	117 (100%)
Pearson chi-square 0.43 (d.f. 1) Significance 0.51			

Table 7.15 Mann-Whitney U tests of differences in mean rankings between bidders and targets for news in forecasts and forecast deviation variables

	Mean ranks Bidders	Targets	*Z*-statistic	Two-tailed probability
NEWS	96	71	-2.90	0.00**
GOODNEWS	68	60	-1.24	0.21
BADNEWS	14	16	-0.17	0.86
FD	66	67	-1.19	0.23
POSFD	32	36	-0.72	0.47
NEGFD	40	20	-3.87	0.00**

News variable (NEWS)

Table 7.14 shows that there is a significant difference between bidders and targets in the frequency of good news over bad news forecasts. Targets are significantly more likely to disclose bad news compared with bidders. This is to be expected.

Bidders are likely to be successful companies whose results are improving from year to year. Targets, on the other hand, are more likely to be experiencing trading difficulties (consequently, they are subject to takeover bids) giving rise to profits less than previous periods.

Mann-Whitney results in table 7.15 show that the mean rankings of differences in news content of forecasts (NEWS) are significantly different for bidders and targets. The mean rankings for bidders are significantly higher than for targets, suggesting that bidders' forecast results are better, compared with previous performance, than are targets' forecast results. There is no significant difference in mean rankings for the good news (GOODNEWS) and bad news (BADNEWS) subsamples.

Forecast deviation (FD)

No significant difference between bidders and targets was found in the frequency of positive and negative deviations. The mean rankings of negative forecast deviation (NEGFD) are significantly higher for bidders than for targets. This suggests that, when bidders disclose bad news, the bad news is worse than that for targets. There is no significant difference in the mean rankings between bidders and targets for forecast deviation (FD), nor for the positive deviations (POSFD) subset.

Agreed and contested bids

The news content variables are analysed between agreed and contested bids in table 7.16. The frequency of forecasts with positive deviations (POSFD) is significantly greater during contested bids. No significant difference was found for the news in the forecast (NEWS) variable. There is no significant difference in Mann-Whitney mean rankings for agreed and contested bids (consequently results are not reported here).

7.4.1 Summary of results of news content analysis of forecasts

In support of H_{34}, a tendency to disclose good news was observed. Out of a total of 153 readings for news in the forecasts (NEWS), only 30 (20%) are classified as bad news. Out of a total of 117 readings for forecast deviation (FD), only 48 (42%) are classified as negative deviations.

Table 7.16 Analysis of news content variables between contested and agreed bids

	Agreed	Contested	Total
GOODNEWS	53 (78%)	70 (82%)	123 (80%)
BADNEWS	15 (22%)	15 (18%)	30 (20%)
NEWS	68 (100%)	85 (100%)	153 (100%)
Pearson chi-square 0.46 (d.f. 1) Significance 0.49			
POSFD	21(47%)	48 (67%)	69 (59%)
NEGFD	24 (53%)	24 (33%)	48 (41%)
FD	45 (100%)	72 (100%)	117 (100%)
Pearson chi-square 4.58 (d.f. 1) Significance 0.03			

A significant difference between bidders and targets was found in the frequency of good news over bad news forecasts. Targets are significantly more likely to disclose bad news compared with bidders. No significant difference was found between bidders and targets in the frequency of positive and negative deviations. This result is confirmed by Mann-Whitney results which show that bidders' forecasts disclose results that are significantly better, compared with previous results, than targets'.

Based on Mann-Whitney analysis of negative forecast deviations (NEGFD), the results suggest that when bidders disclose bad news, the bad news is worse than that for targets.

Finally, a greater proportion of forecasts disclosed during contested bids contained positive forecast deviations compared with agreed bids.

To summarise, there is evidence that more good news is disclosed in forecasts than bad news. Targets are more likely to disclose bad news, but when bidders disclose bad news it tends to be worse, on average, than targets' bad news.

7.5 Discussion of chapter results and conclusions

This chapter analysed content of disclosures in profit forecasts to assess whether disclosure is related to takeover-context variables, forecast-specific variables and firm-specific variables. In addition, the news content of the forecasts was analysed.

Content analysis of disclosures

For the two dependent variables measuring disclosures in forecasts, and in all regression models, type of bid and forecast horizon were significant. Due to increased competition and to increased risk of litigation, disclosures in forecasts were significantly greater during contested bids. The findings for horizon forecast were in opposite directions for items disclosed and assumptions disclosed. Fewer items (contrary to expectations), but more assumptions, were disclosed in longer horizon forecasts. The greater number of items disclosed in short horizon forecasts may be because forecasts disclosed after the forecast period end (estimates), with very short forecast horizons, are more in the nature of preliminary earnings announcements and therefore follow a fuller annual accounts type presentation.

Significantly more items and assumptions (only in one model) were disclosed in voluntary compared with involuntary forecasts. It is to be expected that forecasts made reluctantly by management will contain fewer disclosures. Significantly more items and assumptions were disclosed in longer period forecasts. Shorter period (six months or less) forecasts are often similar to interim reports which disclose less than annual forecasts/annual reports. Significantly more assumptions were disclosed by target forecasters, probably because targets and their advisors are more likely to be sued in the event of litigation. Thus, greater protection from assumptions is looked for in these forecasts.

Firm-specific variables were only significant in one of the four models estimated. Significantly more items were disclosed (in one model only) where the percentage management ownership was lower and where big-six auditors and higher reputation financial advisors were involved in the bid.

Thus, the takeover-context variables and forecast-specific variables appear to be most relevant in determining disclosures in forecasts. Firm-specific variables have less explanatory power in the regressions.

Content analysis for agreed and contested bids

The analysis for agreed and contested bids produced quite different results. The number of items disclosed depended on the circumstances of making the forecast for both agreed and contested bids. Forecast horizon also had an influence on disclosure of items for both agreed and contested bids. Period forecast was significant only in contested bids.

For disclosure of assumptions, forecast horizon was the dominant influence in agreed bids. In contested bids, disclosure of assumptions was influenced most strongly by circumstances of making the forecast, by whether the forecaster was a target and by the period forecast. That targets are a significant influence on disclosure content in contested bids mirrors the finding for disclosure/nondisclosure of forecasts in contested bids.

News content in forecasts

In summary, in support of H_{34}, a tendency to disclose good news was observed. There is evidence that more good news was disclosed in forecasts than bad news. Evidence from an analysis of the news content of the forecasts is consistent with research findings in the US. While there is a tendency to disclose good news in forecasts, there is evidence of disclosure of bad news in some forecasts. Good news forecasts are, as expected, more likely during contested bids compared with agreed bids.

Chapter 8: SUMMARY, CONCLUSIONS AND IMPLICATIONS OF THE RESEARCH

8.1 Objectives and summary of research project

This section is considered under the five research issues outlined in chapter 1.

Influences on disclosure of forecasts

The major objective of this study is to analyse factors which help to predict or explain management decisions to publish profit forecasts during takeover bids. Forecasts are rarely disclosed in the UK. Exceptions are their disclosure in initial public offering prospectuses and in takeover documents. Studies of users' needs have shown forecast information to be one of the most important financial disclosures a company can make (Courtis, 1992). Given the perceived importance of forecasts, it is surprising that more research in the UK has not been devoted to examining their disclosure, and content of disclosures therein. Previous UK studies on forecasts have tended to analyse the accuracy of the forecasts rather than the disclosure decision (Dev and Webb, 1972; Westwick, 1972; Ferris, 1975 and 1976; Keasey and McGuinness, 1991; Firth and Smith, 1992). Since the early 1970s, UK research has focused on forecast accuracy in initial public offering prospectuses. Thus, takeover bids were chosen as the disclosure environment for this research.

The dominant motive in disclosing forecasts during takeovers is related to the ability of the forecast to help the bidder or target achieve 'success'. Success for the bidder is to complete the bid at the best possible price. Success for the target in agreed bids is to optimise the offer price. Success for the target in contested bids may be to defeat the bid, or, in the event of not defeating the bid, to optimise the offer price. It follows that any decision to disclose a profit forecast is taken predominantly by reference to whether disclosure will materially assist the forecasters' prospects of success.

Chapter 2 reviewed the literature on disclosure. That literature, which is concerned with general or periodic disclosure, has not yet produced a consensus on the economic determinants of managers' forecast choices, nor on why managers release forecasts in routine disclosure situations. Empirical research on financial reporting has typically followed either an efficient markets or costly contracting approach. However, it provides little evidence useful to managers in developing disclosure strategies to communicate effectively with investors.

Signalling theory and agency theory are the primary theoretical bases for nearly all empirical research on disclosure and offer explanations of incentives for voluntary disclosure by management. Consequently, this research applied them to analyse firms' forecast disclosure choices. Empirical evidence supporting agency incentives for disclosure has been weak, as has been the evidence concerning the signalling value of forecast disclosure.

Agency costs are likely to be particularly high during takeover bids. Bidders' management know more about the bidder than target management and shareholders. Agency theory is relevant to bid defences, where target management might be motivated by personal considerations such as job retention or retention of control of the company (in the case of owner managers), at the expense of shareholders. Signalling theory issues, similar to those arising on issuing new shares, are relevant where the bidder issues shares in consideration for the bid. Disclosure of forecasts by targets may signal the target's intention to strongly defend the bid. Disclosure of forecasts and choice of advisors may be used as signals of quality by both bidders and targets.

Some analysis of agency theory and signalling theory was considered appropriate to this research. However, given the specialist setting of takeover bids, these theories were unlikely to provide full explanations of motivations for disclosure of profit forecasts.

Incentives for disclosure of profit forecasts have been examined in previous studies in North America (see table 2.4 for a summary), but not in the UK. No clear picture has emerged from that research. In any event, there is evidence that the findings of US research may not be applicable to the UK (Frost and Pownall, 1994).

Most disclosure research is set in routine business situations. Choosing specialist settings in which to study disclosure decisions may provide valuable new evidence and insights on incentives to disclose. The examination of disclosure in the specialist context of takeover bids is expected to add insights into disclosure decisions by managements.

Influence of market expectations on disclosure

Ajinkya and Gift (1984) found that forecasts are disclosed to align analysts' expectations with actual results. Ajinkya and Gift's expectations adjustment hypothesis, together with the interview evidence from chapter 5, suggested that forecast disclosure would be more likely when market expectations are out of line with actual results. Aligning market expectations is likely to be more important, and to have greater economic consequences, during takeover bids than in routine disclosure situations examined by other researchers (Ajinkya and Gift, 1984; Ruland, Tung and George, 1990; Skinner, 1994).

Profit forecasts as defence weapons

Disclosure of profit forecasts has long been considered as an effective defence strategy, although empirical evidence has not supported this conjecture. Of the many papers on takeover defence strategies, only a small number relate to the UK, and of those, only two (Jenkinson and Mayer, 1991; Sudarsanam, 1994) are comparable to this research. These two papers examined a number of defence strategies. This study tested the effectiveness of a single defence strategy, disclosure of profit forecasts. It is more comprehensive than the previous two UK studies. Jenkinson and Mayer (1991) used an in-depth, case study approach of 42 hostile bids. Sudarsanam examined 238 hostile bids (versus 701 bids - 542 agreed;

159 hostile in this research) and covered a different time period (1988-1992 versus 1983-1989).

Content of disclosures in forecasts

There are few regulations governing content of disclosures in forecasts. This study extended prior content of disclosure studies from annual reports to profit forecasts. Most prior literature is not comparable to this study as it deals with disclosures in annual reports (see table 2.5 for a summary). The few papers that studied content of disclosure in profit forecasts (Dev, 1973; Hartnett, 1990; Montgomerie and Walker, 1992) did not conduct an empirical statistical analysis of content. Empirical research findings may be valuable in assisting policy makers to develop better regulations governing content of disclosures in forecasts.

News content of forecasts

Most theoretical research (based on firms making decisions in normal routine business settings) suggests that information will be disclosed when firms have good news to convey. However, empirical findings are inconsistent with this prediction, and generally show a preponderance of good news disclosure, with some bad news (see table 2.6 for a summary). More recent theoretical literature has included proprietary costs, and the reactions of third parties to disclosure, to account for firms disclosing bad news.

Motivations for disclosing good or bad news are likely to be quite different in the specialist setting of takeover bids. This research considered the news content of forecasts and examined whether they contained good or bad news.

Data

This study provides, in terms of scope, size, extent and depth, a large data base of information on takeover bids: on firm characteristics of bidders and targets; on views of a variety of participants in takeover bids; on disclosure of profit forecasts during takeover bids; and on the form and content of a large group of forecasts.

This data base provides valuable information and insights both to researchers and to firms, advisors and the business community involved in takeover bids.

Most US research is based on forecast disclosure by management in routine business settings (such as annual forecast disclosures). US forecasts are collected from news reporting sources such as *The Wall Street Journal* (Patell, 1976; Imhoff, 1978; Jaggi and Grier, 1980; Cox, 1985; Penman, 1980; Ajinkya and Gift, 1984; Waymire, 1985; Pownall and Waymire, 1989; Lev and Penman, 1990), *Dow Jones News Retrieval Service* (McNichols, 1989; Ruland, Tung and George, 1990; Baginski, Hassell and Waymire, 1994; Skinner, 1994; Frankel, McNichols and Wilson, 1995; Skinner, 1995), both *The Wall Street Journal* and *Dow Jones News Retrieval Service* (Pownall, Wasley and Waymire, 1993) and from data bases such as *Compustat* (Ruland, 1979). Thus, the data for these studies are limited by the coverage of the data base accessed.

Confirming limited coverage by the financial press, a search of the *Financial Times* for the period covered by this research produced relatively few references to forecasts disclosed during takeover bids.

In this research, forecasts were collected directly from takeover and defence documents. Few researchers studying forecast disclosure have collected forecasts directly. Clarkson, Kao and Richardson (1994) and Clarkson, Dontoh, Richardson and Sefcik (1992) are exceptions (probably because they are Canadian rather than US studies). This research differs from the Canadian studies in the greater number of takeover documents examined. In addition, the study represents a complete sample (every takeover document was examined) of all 701 UK public company takeover bids during the five year period studied.

Most US studies of forecast disclosure include only point or range forecasts. The present research comprises an exhaustive sample of forecasts disclosed during a five year period and includes qualitative and upper/lower bounded forecasts, as well as point and range forecasts.

A large data base of examples from profit forecasts has been prepared (included in appendix 4). This data base provides useful precedent material for researchers and practitioners.

Methodology

The methodology included qualitative and quantitative research techniques. Eleven interviews were conducted with participants in the decision to disclose a forecast in takeover bids that are part of this study. Quantitative analysis included univariate, bivariate and multivariate statistical techniques. Empirical data was analysed initially using nonparametric statistics such as Mann-Whitney U tests and Pearson chi-square statistics. Hypotheses concerning disclosure/nondisclosure of forecasts were tested in multivariate models using logit analysis. Content of disclosures in forecasts was analysed using OLS regression, Poisson regression and negative binomial regression. Content analysis results based on negative binomial regression were reported.

This study has extended previous methodology in a number of ways.

In an effort to be relevant to real life situations this research explored in advance, through interviews, the issues to be empirically researched. While this does not guarantee that the empirical research design is ideal, some effort has been made to make it as relevant as possible.

Because the date of takeover bids could be ascertained, bid horizon could be measured and compared for forecasters and nonforecasters. Previous research, based on routine disclosures, has only been able to measure forecast horizon. Forecast horizon cannot be calculated for nonforecasters so the horizon for forecasters and nonforecasters has not been compared in most prior research. Waymire (1985) examined forecast horizon for repeat (i.e. regular) forecasters compared with nonrepeat forecasters in an attempt to see whether this variable was related to disclosure of forecasts.

Most studies use a single method of analysing deviations from market expectations. Similar to this research, Clarkson, Dontoh, Richardson and Sefcik (1992) and Clarkson, Kao and Richardson (1994) compare market expectations with subsequent actual results for forecasters and nonforecasters. Clarkson, Dontoh, Richardson and Sefcik (1992) analysed differences in means. Clarkson, Kao and Richardson (1994) analysed differences in numbers of firms categorised between good news firms and bad news firms. The present research adopted two methods of analysis: (i) analysis of differences in numbers of firms classified between positive and negative deviations from market expectations; and (ii) analysis of rankings of differences in deviation from market expectations between forecasters and nonforecasters.

The definition of outcome of bids was extended to include whether the offer price was increased during the bid, as well as success/failure of bids. In addition, the effect of publication of forecasts on outcome of bids was considered for agreed bids as well as contested bids. This study, unlike others, also considered whether publication of forecasts by bidders made any difference to the outcome of bids.

Content of disclosures in forecasts was measured by counting items and assumptions disclosed. Statistical methods suitable for count data were applied in analysing the results. This is the first time such count data methodology has been applied in an accounting study.

8.2 Evidence from interviews

Eleven interviews were conducted as background to this study. The complexity of the disclosure environment, especially during takeovers, was emphasised by interviewees.

<u>Factors influencing disclosure</u>

The most important factors influencing disclosure of forecasts, and regularly commented on by interviewees, were bid horizon, whether the bid was contested or not and whether the potential forecaster is a bidding or target company.

Purchase consideration was frequently mentioned as being particularly influential on whether bidders disclosed forecasts. These factors were generally confirmed in the subsequent empirical analysis.

Advisors were considered especially influential, as were economic conditions. Size of firm was regularly referred to, but the direction of the relationship between size and disclosure of forecasts varied. Generally, empirical results did not support advisors, year or size as important influences on disclosure.

Market expectations

Interviewees were unanimous that market expectations are very influential on disclosure, both when expectations are above, as well as below, forecast results. This was subsequently confirmed by empirical findings.

Strategic value of forecasts

Forecasts were generally seen by interviewees as effective financial weapons. Not surprisingly (given vested interests), this was particularly the expectation of the five advisors interviewed. Empirical findings showed forecasts to be related to outcome of bids but the findings were weak compared with interviewees' expectations of their effectiveness.

Content of disclosures in profit forecasts

Interviewees were not agreed on whether it is better or worse to disclose many items in forecasts. They were generally averse to disclosing too much detail in the forecasts and, at the same time, wanted to carefully choose assumptions to give the greatest protection to the forecaster. Consistent with this view, empirical analysis showed a significantly greater number of assumptions disclosed compared with items disclosed.

News content of forecasts

News content of forecasts was considered of paramount importance in the disclosure decision, with mixed views being expressed on disclosure of bad news

and good news. Comments tended to indicate that bad news would not be disclosed as readily as good news, especially in the case of targets in contested bids. These comments are consistent with the findings of this research.

8.3 Summary of empirical results and significance of findings

The results that follow are summarised under the five research issues being addressed by this research.

8.3.1 Factors influencing disclosure of profit forecasts (H_1-H_{14})

Chapter 3 developed hypotheses to test influences on disclosure of forecasts derived from agency theory, signalling theory and from the takeover context of the research. The variables hypothesised by agency theory and signalling theory to influence disclosure received little support from the analysis, supporting the conjecture in chapters 1 and 2 that these theories do not provide good explanations of motivations for disclosure in specialist contexts such as takeover bids. The findings highlight the dominance of context on disclosure.

8.3.1.1 Bivariate analysis

Differences between forecasting and nonforecasting firms were analysed using Mann-Whitney U tests of differences in mean rankings of continuous variables and chi-square analysis of differences between categorical variables.

As predicted by H_2, the frequency of forecast disclosure was significantly greater by targets than by bidders. As motivations for disclosing forecasts are different for bidders and targets, disclosure by bidders was analysed separately from disclosure by targets. Table 8.1 summarises the results.

<u>Bivariate analysis - Bidders (H_1-H_{14})</u>

More forecasts were disclosed by bidders during contested bids (H_3) and when paper was included in the consideration (H_4). Bivariate analysis supported the hypotheses that fewer forecasts are disclosed when the bid horizon is longer (H_5), that large bidders voluntarily disclose more forecasts (H_6) (subject to two of the

four size variables tested not being significant), and that firms with larger percentage substantial shareholdings disclose fewer forecasts (H_9). More forecasts were disclosed by quoted bidders (H_{12}) and by UK listed companies (H_{14}).

Table 8.1 Summary results of bivariate analysis of differences in variables between forecasters and nonforecasters (H_1-H_{14})

Hypothesis	Bidders		Targets
H_1	YEAR		YEAR
H_2		BT**	
H_3	BID*		BID**
H_4	CON**		CON
H_5	BHOR**		BHOR**
H_6	VAL**		VAL**
H_6	REV*		REV**
H_6	TA1		TA1**
H_6	TA2		TA2**
H_7	LEV		LEV**
H_8	MO		MO**
H_9	SSH*		SSH
H_{10}	AUD		AUD*
H_{11}	MB		MB**
H_{12}	QUOTED**		N/A
H_{13}	IND		IND*
H_{14}	NAT**		NAT

** Significant at < 0.01 * Significant at ≤ 0.05

Full statistical output for this table is shown in tables 6.1 and 6.2 and in tables A3.1 and A3.2 in appendix 3

There was no support in the case of bidders for the influence of economic conditions (proxied by year) (H_1), leverage (H_7), percentage management ownership (H_8), auditor/reporting accountant (H_{10}) and financial advisor (H_{11}). The null hypothesis of no industry influence, H_{13}, was supported.

Bivariate analysis - Targets (H_1-H_{14})

There was initial support from bivariate analysis for the hypotheses that more forecasts are disclosed by targets during contested bids (H_3), that fewer forecasts are disclosed when the bid horizon is longer (H_5), and that large (H_6), more highly

leveraged companies (H_7), with lower percentage management ownership (H_8), voluntarily disclose more forecasts.

More forecasts were disclosed by targets where big-six firms of auditors (H_{10}) and higher reputation firms of financial advisors (H_{11}) were involved in the takeover. The null hypothesis that industry has no effect (H_{13}) was not supported. Industry profile for target company forecasters and nonforecasters was significantly different. There were fewer forecasts in the durable goods sector and the banking and financial sector.

There was no support in the case of targets for the influence of economic conditions (H_1), purchase consideration (H_4), percentage substantial shareholdings (H_9) and nationality (H_{14}).

Initial conclusions

The choice of variables tested in the research, and the expectation of their relevance to the disclosure decision, is validated by them all being variously significant in bivariate analysis (this is not to say that an exhaustive set of variables was tested).

Bivariate results are all in the directions predicted by hypotheses H_1-H_{14}. These initial results enable a number of preliminary observations. The dominant effect of takeover-context variables is apparent. Four of the five takeover-context variables were significant in the initial analysis. Type of bid, party to the bid, forecast horizon and purchase consideration (only in the case of bidders, as predicted) were significantly different for forecasters and nonforecasters. There was no support for year as an influence on disclosure of forecasts (this finding was not borne out in subsequent multivariate analysis).

For bidders, firm-specific variables were not significantly different between forecasters and nonforecasters. In the case of targets, all firm-specific variables,

except for substantial shareholdings and nationality, were significantly different between forecasters and nonforecasters.

Initial results on size of bidder and disclosure are anomalous. Only two of the four size variables were significantly different between forecasters and nonforecasters. Most studies that include different size variables report consistent results for all measures of size.

These initial results are consistent with the discussion of motivations for disclosure in chapters 1 and 2. The specialist context of the research was expected to be more relevant to disclosure than the theories developed to describe disclosure in more general settings. The present research questions whether agency theory and signalling theory are appropriate tools to analyse or predict disclosure in the context of takeovers. These initial results support the conjecture that takeover-context considerations are of more importance.

8.3.1.2 Multivariate analysis - bidders and targets

Multivariate analysis was carried out separately on bidders and targets. The results are summarised in table 8.2. Results differed depending on whether the variable, substantial shareholdings, was included or excluded from the model.

<u>Multivariate analysis - Bidders (H_1-H_{14})</u>

In the model including percentage substantial shareholdings, the probability of bidders disclosing forecasts was significantly related to two variables: bid horizon and type of bid. As predicted, probability of disclosure increased as bid horizon decreased and during contested bids. Forecasts were also significantly more likely in the earlier years of the study. In addition, the model included a third variable, year, but the coefficients were not significant.

Five variables, bid horizon, value of bid, year, type of bid and purchase consideration were significant in the model excluding percentage substantial shareholders. Probability of disclosure increased as bid horizon decreased,

increased for larger bids and during contested bids. A forecast is significantly less likely in cash bids and significantly more likely in 1988, 1990 and in paper bids.

Table 8.2 Summary results of logit analysis of disclosure/nondisclosure of forecasts (H_1-H_{14})

Hypothesis	Bidders		Targets	
Hypotheses	Logit analysis including SSH 186 cases	Logit analysis excluding SSH 308 cases	Logit analysis including SSH 382 cases	Logit analysis excluding SSH 530 cases
H_1	YEAR(included in model; but not significant)	YEAR*	YEAR	YEAR
H_2				
H_3	BID**	BID*	BID**	BID**
H_4	CON	CON*	CON	CON
H_5	BHOR**	BHOR**	BHOR*	BHOR**
H_6	VAL	VAL*	VAL	VAL*
H_7	LEV	LEV	LEV	LEV
H_8	MO	MO	MO	MO
H_9	SSH		SSH	
H_{10}	AUD	AUD	AUD	AUD
H_{11}	MB	MB	MB	MB
H_{12}	QUOTED	QUOTED	QUOTED	QUOTED
H_{13}	IND	IND	IND	IND*
H_{14}	NAT	NAT	NAT	NAT

** Significant at < 0.01 * Significant at ≤ 0.05

Full statistical output for this table is shown in tables 6.4, 6.5, 6.6 and 6.7 and in tables A3.6. A3.7, A3.8 and A3.9 in appendix 3

In both models, bid horizon had considerably more explanatory power than type of bid. However, type of bid had a much higher influence on the odds of disclosing a forecast compared with bid horizon.

<u>Multivariate analysis - Targets (H_1-H_{14})</u>

In the model including substantial shareholdings, probability of disclosure of a forecast by targets increased as bid horizon decreased and during contested bids. Value of bid and industry also became significant when substantial shareholdings were excluded from the model. As predicted, the probability of disclosure increased as value of bid increased. Type of bid contributed more explanatory power to the model, as well as having a greater effect on the probability of

disclosure. Dropping percentage substantial shareholdings improved the explanatory power of the model and improved the goodness of fit statistics.

Conclusions from multivariate analysis for bidders and targets

Two variables accounted for almost all the influences on disclosure of forecasts for both bidders and targets: bid horizon and type of bid. These two variables were significant in all logit models. In support of H_3 and H_5, probability of forecast disclosure was greater the shorter the bid horizon and during contested bids. Year was also included in both bidders' models, although the coefficients were only significant in one of the two models. Probability of forecast disclosure was higher in 1988 and 1990. Value of bid and purchase consideration were significant in the one of the two bidders' models. Value of bid and industry were significant in one of the two models for targets.

As with the initial analysis, multivariate analysis shows the dominance of the takeover-context of the research, with the variables, type of bid and bid horizon, significant in all models. For bidders, two other takeover-context variables, year and purchase consideration, were significant in one model.

These results are consistent with the expectation, expressed in chapter 1, that the takeover context would be the dominant influence on disclosure. In contested bids, both bidders and targets have to make greater efforts to ensure success. The advisors interviewed suggested that making a profit forecast is always on the agenda during a takeover bid. It is not surprising that more profit forecasts are disclosed in the competitive environment of contested bids, when managements on both sides are defending their performance and are attacking the other side's performance. Disclosure in contested bids may be motivated by considerations of the direct effect of the information in the forecast on, say, offer price and by other indirect effects of disclosure. One advisor commented on the value of disclosure of forecasts, not because of the information in the forecast *per se*, but because of its PR value.

The closer the bid date to the forecast period end, the less risk of getting the forecast wrong. If the bid date is very close to the year end less work and management time is necessary to bring out a forecast. The finding in all models that bid horizon was significantly shorter for forecasters is therefore to be expected.

Purchase consideration was expected to be very influential on bidders' disclosure decisions. In cash bids, there seems little reason for bidders to disclose forecasts, and it is hard to see how forecasts by bidders would influence the outcome of bids, except in exceptional circumstances. A forecast was only disclosed in four cash bids: either because shares were separately issued to raise cash for the bid or because of the contested nature of the bid. There was no *a priori* expectation that economic conditions would be related to forecast disclosure. However, intuition suggested they might be, as economic conditions prevailing at the time of the bid would affect the news content of the forecasts and the forecastability of earnings. Thus, the finding that year is associated with disclosure of forecasts for bidders is not surprising, but explaining the finding is problematic. More forecasts were disclosed by bidders in the earlier years of the study. Table 4.1 summarised the economic conditions prevailing during the period studied. A variety of economic statistics are included in the table. These do not suggest that economic conditions were more attractive in the earlier, rather than later, years of the study. From a 1995 perspective, it is difficult to identify the economic factors that might explain why bidders disclosed more forecasts in the earlier years of the study.

Gibbins, Richardson and Waterhouse (1990, 1992) describe firms' disclosure positions. In this context, ritualism was defined as the propensity toward uncritical adherence to prescribed norms for disclosure of financial information. Applying a similar argument, it may have been more 'fashionable' to disclose a forecast in the 1980s compared with the 1990s. Alternatively, maybe fear of litigation has increased during the 1990s, whereby companies are more averse to disclosing forecasts. Nothing in the interviews suggested a change in attitude toward disclosure of forecasts or towards litigation in the five year period.

Anomalous results on size measures, found in the initial bivariate analysis, were also apparent in multivariate analysis. Only one of the four size measures, value of bid, is significant in only some multivariate analysis for bidders. Value of bid, total assets and owners' equity are variously significant in logit models for targets. It is not clear what value of bid (for bidders) and value of bid/total assets/owners' equity (for targets) measures that is not measured by the other size variables. Further analysis to explain this anomaly was unsuccessful.

Comparison of bivariate and multivariate results

As shown by tables 8.1 and 8.2, the results of bivariate analysis are very different from multivariate results. Bivariate results for bidders show turnover, substantial shareholdings, listing status and nationality to be significantly different for forecasters and nonforecasters, yet in multivariate analysis none of these variables were significant. Conversely, year was not significant in bivariate analysis but was significant in multivariate analysis.

The difference between bivariate and multivariate results for targets is even more extreme. Turnover, leverage, percentage management ownership share, auditor and financial advisor were significantly different for target forecasters compared with nonforecasters but these were not significant in multivariate analysis.

It is not clear why there were such differences between bivariate results and multivariate results. The most obvious explanation, correlations between the independent variables, is not supported by Spearman correlations reported in tables A3.3 and A3.4 in appendix 3. With few exceptions, correlations between independent variables were not high, except for correlations between the four size variables.

Comparison with previous research findings

Most previous research into forecast disclosure has focused on a more limited and different range of variables than this research. Of the limited range covered in

previous research, three variables, size, management ownership and bid horizon (forecast horizon in prior research), were included in this study. Ruland (1979), Cox (1985), Lev and Penman (1990), Clarkson, Kao and Richardson (1994) and Frankel, McNichols and Wilson (1995) (for utilities only) found size to be significantly different between forecasters and nonforecasters. No significant difference in size between the two groups was found by Waymire (1985). In the bivariate analysis in this study, forecasting targets were significantly larger than nonforecasting targets. Forecasting and nonforecasting bidders differed on only two of the four size variables included in the research. The weaker findings of a relationship between size and forecast disclosure for bidders may be because bidders are on average larger than targets. This might account for the findings for size being stronger for targets. In multivariate models only one measure of size, owners' equity, was significant for targets only and in just one of the four models estimated. Thus, size on its own did not generally explain differences in forecasting. The anomalous results on size, compared with the mixed results of previous research, are not inconsistent.

Ruland, Tung and George (1990) found ownership structure to be the most important variable in multivariate analysis explaining forecast reporting and nonreporting firms. There was no support for percentage management ownership as an explanation of forecast disclosure in the multivariate models tested in the present research.

Because of the dominance of the takeover environment, it is not surprising that results for nontakeover variables, such as size and management ownership, are weak in this research compared with previous research findings.

Previous research has only been able to measure forecast horizon. The takeover context of this research enables bid horizon to be measured for all firms. Forecasters and nonforecasters could then be compared. The findings in this research for bid horizon are opposite to those in Waymire (1985). Waymire found that the forecast horizons for regular repeat forecasters were longer than for

nonrepeat forecasters. In addition, he found that earnings of repeat forecasters are significantly less volatile than nonrepeat forecasters. Waymire suggests that nonrepeat forecasters, with highly volatile earnings, disclose forecasts closer to year end to reduce the risk of making an erroneous forecast. In this research, bid horizon for forecasters is, as one would expect, shorter than for nonforecasters.

8.3.1.3 Multivariate analysis - agreed and contested bids

When hypotheses were formulated it was intended to apply them to bidders and targets. The findings in Powell (1995), showing characteristics of hostile and friendly targets to differ significantly, prompted an analysis of the hypotheses by agreed and contested bids. This level of analysis produced quite different (but not inconsistent) results with the earlier analysis for bidders and targets.

Table 8.3 Summary results of logit analysis of disclosure/nondisclosure of forecasts for agreed and contested bids (H_1-H_{14})

Hypothesis	Agreed bids		Contested bids	
Hypotheses	Logit analysis including SSH 424 cases	Logit analysis excluding SSH 626 cases	Logit analysis including SSH 144 cases	Logit analysis excluding SSH 212 cases
H_1	YEAR	YEAR	YEAR	YEAR
H_2	BT	BT	BT*	BT**
H_3				
H_4	CON	CON	CON	CON
H_5	BHOR**	BHOR**	BHOR	BHOR
H_6	VAL*	VAL*	VAL	VAL
H_7	LEV	LEV	LEV	LEV
H_8	MO	MO	MO	MO
H_9	SSH		SSH	
H_{10}	AUD	AUD	AUD	AUD
H_{11}	MB	MB	MB	MB
H_{12}	QUOTED	QUOTED	QUOTED	QUOTED
H_{13}	IND	IND	IND	IND
H_{14}	NAT	NAT	NAT	NAT

** Significant at < 0.01 * Significant at ≤ 0.05

Full statistical output for this table is shown in tables 6.11, 6.12, 6.13 and 6.14 and in tables A3.10. A3.11, A3.12 and A3.13 in appendix 3

The results for agreed and contested bids are summarised in table 8.3. Disclosure of forecasts in agreed bids was strongly influenced by bid horizon and by value of

bid. In contrast, in contested bids, one factor, whether the firm is a target (rather than a bidder), was highly significant.

In agreed bids, forecasts are probably disclosed by bidders and targets to increase the likelihood of the bid succeeding: of the bid being accepted by target shareholders (and possibly bidder shareholders where paper is issued). However, if the circumstances prevailing at the time of the bid are not conducive to a forecast, other methods of persuading shareholders to accept the bid are likely. Long bid horizons are not conducive to forecast disclosure. Thus, it is not surprising that this variable is related to forecast disclosure in agreed bids.

In contested bids, it was expected that a relationship would be found between forecast disclosure and target (rather than bidder) firms. However the strength of the finding is surprising - that is was the single and main influence on disclosure. Industry was marginally significant in only one of the two models for contested bids.

8.3.2 Influence of market expectations on disclosure of forecasts (H_{15})

Some support for signalling theory is provided in testing the influence of market expectations on disclosure of forecasts. It was hypothesised that the more expectations deviate from actual results, the more likely the disclosure of a forecast.

Mean rankings of differences in deviations from market expectations, and of its positive subsample, were significantly higher for forecasters than nonforecasters. There was no difference in rankings for the negative deviations from market expectations subsample. This is consistent with Clarkson, Dontoh, Richardson and Sefcik (1992) who found the mean value of their good news measures for forecasters exceeded that for nonforecasters.

As expected, based on number of firms with positive/negative deviations from market expectations, there was a higher incidence of forecast disclosure where

subsequent actual results were greater than market expectations. However, chi-square statistics indicated that this difference in frequency was not significant. No relationship was found between the decision to forecast and classification between positive and negative deviations for market expectations. These results are inconsistent with Clarkson, Kao and Richardson (1994) who found support for their good news hypothesis that disclosure of a forecast is related to whether firms are classified as having positive deviations from market expectations/good news to disclose.

A logit model of disclosure/nondisclosure of forecasts, including deviation from market expectations, was estimated. Deviation from market expectations was not significant (or even nearly significant) in the model.

These results must be interpreted with caution for two reasons. Firstly, there were only 261 cases available for analysis. This small sample is dominated by bidders so the results may be dominated by motivations of bidders. The interview evidence in chapter 5 indicated that bidders are more likely to disclose bad news voluntarily than targets, particularly targets in contested bids. In addition, bidders tend to be larger. Larger firms, with PR departments, may be better at guiding market expectations through analysts' forecasts. Thus, market expectations are less likely to be out of line for bidders, who are less likely therefore to disclose a forecast. The evidence for bidders and targets is consistent with this interpretation.

In conclusion, these results provide weak evidence supporting the hypothesis that forecast disclosure is more likely when market expectations are out of line with actual results. The evidence suggests that firms are more likely to disclose a forecast where market expectations are pessimistic and where subsequent actual results are greater than expectations.

It is likely that the dominance of the takeover environment resulted in weaker findings in this research compared with previous studies.

8.3.3 Strategic role of profit forecasts (H_{16}-H_{19})

As stated earlier, forecast disclosure seems to be motivated with a view to maximising the prospects of success, viewed from the perspectives of bidders and targets. The influence of disclosure of forecasts on outcome of bids for both bidders and targets was tested.

As confirmed by the interviews, the relationship between success (however defined) and disclosure of forecasts is difficult to test. For example, in agreed bids the published bid price may not have increased. However, at an earlier stage, there may have been a price increase conditional on publication of a forecast prior to the bid being announced. It is impossible to test events occurring during the negotiation phase of bids using empirical research techniques. In contested bids, it is difficult to know whether it is publication of a forecast, or some other event, that influences the outcome. It is also difficult to isolate the extent to which a price increase relates directly to the publication of a forecast.

No association between outcome of bids, however defined, and forecast disclosure was found for bidders. One would expect bidders' forecasts to be of value in persuading target shareholders of the value of an offer, where the proposed consideration is bidder shares or a mixture of shares and cash. No statistical evidence supported the proposition that bidders making forecasts were more likely to succeed than nonforecasting bidders. This does not necessarily mean that forecasts by bidders are ineffective; this research, however, has not identified what the effect is. Bidders may resort to forecasts when, owing to other perceived weaknesses in the bid, they feel motivated to do so. Bidder forecasts might be used (especially in less generous offers, where target management are not persuaded by price alone to accept the bid) to impress/persuade wavering target management. Thus, bidders may disclose forecasts in marginal rather than generous bids. This conjecture could be tested by examining the relationship between takeover premium and forecast disclosure.

For agreed bids, there is a significant positive association between disclosure of forecasts by targets and success of bids. This may be because some agreed bids fail before there is time to issue a takeover document/disclose a forecast. For contested bids, there is no association between disclosure of forecasts by targets and success of bids. There is a significant association between disclosure of a forecast and increase in offer price for contested bids only. There is clear evidence that the use of forecasts by targets in contested bids is effective in obtaining increased offer prices.

In conclusion, there is some evidence that forecasts have strategic value for targets, but there is no such evidence for bidders. In particular, disclosure of forecasts in contested bids is significantly related to the incidence of increased offer price.

Consistent with Sudarsanam (1994), publication of a forecast by targets was not found to be related to the success/failure of contested bids. However, where outcome is defined as increase in offer price, publication of a forecast was significant.

8.3.4 Factors influencing disclosures in forecasts: content analysis (H_{20}-H_{33})

The issue of whether disclosure of forecasts should be mandatory was extensively debated in the US in the 1970s. The consensus is against mandatory disclosure. However, the content analysis of forecasts in this research has highlighted the extreme variability of disclosures in forecasts and the need for more guidance/standardisation on the content of disclosures in forecasts.

In general, forecasts disclosed more assumptions than items.

Negative binomial regression results

Negative binomial regression results are summarised in table 8.4. One variable, type of bid, was significant in the direction predicted by H_{21} in all content of disclosures models estimated. Significantly more items and significantly more

assumptions were disclosed in contested bid forecasts. This is consistent with the competitive environment of contested bids. Forecasts may be attacked by the other side for inadequate disclosure, prompting greater disclosure of items. The greater chance of litigation arising from contested bids is likely to encourage those associated with forecasts (mainly advisors) to look for greater protection through the inclusion of more assumptions/caveats.

Table 8.4 Summary results of negative binomial regression of content of disclosures in forecasts (H_{20}-H_{33})

	ITEMS		ASS	
Hypothesis	**Including SSH 141 cases**	**Excluding SSH 205 cases**	**Including SSH 141 cases**	**Excluding SSH 205 cases**
H_{20}	BT	BT*	BT	BT
H_{21}	BID*	BID**	BID*	BID*
H_{22}	CIRC**	CIRC**	CIRC*	CIRC
H_{23}	FHOR*	FHOR*	FHOR**	FHOR**
H_{24}	PER*	PER**	PER*	PER
H_{25}	REV	REV	REV	REV
H_{26}	LEV	LEV	LEV	LEV
H_{27}	MO	MO**	MO	MO
H_{28}	SSH		SSH	
H_{29}	AUD	AUD*	AUD	AUD
H_{30}	MB	MB*	MB	MB
H_{31}	QUOTED - Insufficient number of cases for analysis to be performed			
H_{32}	IND	IND	IND	IND
H_{33}	NAT	NAT	NAT	NAT

** Significant at < 0.01 * Significant at ≤ 0.05

Full statistical output for this table is shown in tables 7.7, 7.8, 7.9 and 7.10

Forecast horizon was also significant in all content of disclosure models but not in the directions predicted by H_{23}. Significantly more assumptions were disclosed in longer horizon forecasts, as predicted. Contrary to expectations, significantly fewer items were disclosed in longer horizon forecasts. This may be because forecasts disclosed after the forecast period end (estimates), with very short forecast horizons, are more in the nature of preliminary earnings announcements and therefore follow a fuller annual accounts type presentation.

Circumstances of making the forecast and period forecast were significant in three of the four models estimated. Fewer items and assumptions were disclosed in involuntary forecasts and in shorter period forecasts, supporting H_{22} and H_{24} in the directions predicted. As involuntary forecasts are made reluctantly by management, it is to be expected that there will be fewer disclosures in such forecasts. This result is much weaker in the case of assumptions disclosed. A greater reluctance to disclose financial information, and at the same time a tendency to include caveats or assumptions in involuntary forecasts, is consistent with management reluctance to publish the forecasts. Shorter period (six months or less) forecasts were expected to disclose less, in the same way that interim reports disclose less than annual reports. This finding is not as strong for assumptions disclosed compared with items disclosed, for similar reasons probably to involuntary forecasts just discussed.

Three firm-specific hypotheses, H_{27} (percentage management ownership), H_{29} (auditor/reporting accountant) and H_{30} (financial advisor) were supported in only one of the four models estimated. In the model excluding substantial shareholdings, significantly more items were disclosed where percentage management ownership was lower, and where big-six auditors and higher reputation financial advisors were associated with the forecasts.

There was no support for H_{20} (forecaster), H_{25} (size), H_{26} (leverage), H_{28} (substantial shareholdings), H_{32} (industry) and H_{33} (nationality) in any of the content of disclosure models tested. Thus, takeover-context variables and forecast-related variables appeared to be most relevant in determining content of disclosures in forecasts. Firm-specific variables had little explanatory power in the regressions.

These content analysis results are not comparable with previous studies which are based on annual report disclosures. Those studies have found various firm-specific variables to be related to disclosure content (see table 2.5 for a summary), which findings have generally not been supported in this research. The takeover context again has dominated the results.

8.3.4.1 Content of disclosures in forecasts - agreed and contested bids

For reasons stated earlier in this chapter, the content analysis was repeated for agreed and contested bids. The results differ somewhat from (but are not inconsistent with) the analysis for the entire group of forecasts. The results for agreed bids are summarised in table 8.5.

Table 8.5 Summary results of negative binomial regression of content of disclosures in agreed bid forecasts (H_{20}-H_{33})

	ITEMS		ASS	
Hypothesis	**Including SSH 62 cases**	**Excluding SSH 94 cases**	**Including SSH 79 cases**	**Excluding SSH 111 cases**
H_{20}	BT	BT	BT	BT
H_{21}				
H_{22}	CIRC**	CIRC**	CIRC	CIRC
H_{23}	FHOR*	FHOR*	FHOR**	FHOR**
H_{24}	PER	PER	PER	PER
H_{25}	REV	REV**	REV	REV*
H_{26}	LEV	LEV	LEV	LEV
H_{27}	MO	MO	MO	MO
H_{28}	SSH		SSH	
H_{29}	AUD	AUD	AUD	AUD
H_{30}	MB	MB	MB	MB
H_{31}	QUOTED - Insufficient number of cases for analysis to be performed			
H_{32}	IND	IND	IND*	IND
H_{33}	NAT	NAT	NAT	NAT

** Significant at < 0.01 * Significant at ≤ 0.05

Full statistical output for this table is shown in tables A3.14 to A3.17 in appendix 3

<u>Agreed bids</u>

Forecast horizon was significant in all models for agreed bids for both number of items and number of assumptions disclosed. Similar to earlier results, significantly fewer items and significantly more assumptions were disclosed in long horizon agreed bid forecasts. Circumstances of the forecast was significant for disclosure of items only, with significantly fewer items disclosed in involuntary forecasts. There was some evidence, for both items and assumptions, that disclosure content is related to size in agreed bids. However, in the case of assumptions, the

direction of the finding was contrary to expectations. Significantly more items, but fewer assumptions, were disclosed in larger company forecasts (for one model only, respectively). It is difficult to say what causes this contrary finding. In the case of assumptions, industry was marginally significant in one model only.

Table 8.6 Summary results of negative binomial regression of content of disclosures in contested bid forecasts (H_{20}-H_{33})

	ITEMS		ASS	
Hypothesis	**Including SSH 62 cases**	**Excluding SSH 94 cases**	**Including SSH 79 cases**	**Excluding SSH 111 cases**
H_{20}	BT	BT	BT**	BT*
H_{21}				
H_{22}	CIRC**	CIRC**	CIRC**	CIRC**
H_{23}	FHOR**	FHOR	FHOR	FHOR**
H_{24}	PER**	PER*	PER*	PER**
H_{25}	VAL	VAL	VAL	VAL
H_{25}	REV	REV	REV	REV
H_{25}	TA1	TA1	TA1	TA1
H_{25}	TA2	TA2	TA2	TA2
H_{26}	LEV	LEV	LEV	LEV
H_{27}	MO	MO	MO	MO
H_{28}	SSH*		SSH	
H_{29}	AUD	AUD	AUD	AUD
H_{30}	MB	MB	MB	MB
H_{31}	QUOTED - Insufficient number of cases for analysis to be performed			
H_{32}	IND	IND	IND*	IND**
H_{33}	NAT	NAT	NAT	NAT

** Significant at < 0.01 * Significant at ≤ 0.05

Full statistical output for this table is shown in tables A3.18 to A3.21 in appendix 3

Contested bids

The results for contested bids are summarised in table 8.6. Circumstances of the forecast and forecast period were significant in all contested bid content of disclosure models. Significantly more items and assumptions were disclosed in longer period forecasts and in voluntary forecasts. Forecast horizon was significant for items and assumptions disclosed in only one of the two models respectively. Similar to the results for disclosure/nondisclosure in contested bids, the number of assumptions disclosed were related to forecaster and industry. Targets disclosed significantly more assumptions than bidders. This is not

surprising because targets company advisors are more likely to be sued if litigation follows the takeover and will therefore want to include more assumptions in contested bid forecasts. Also, litigation is more likely after contested bids, as in agreed bids the bidder and the bidder's advisors will have access to private information during the negotiation stage.

It is interesting to note that forecast period is not significant in any of the agreed bid models but is significant in all contested bid models.

8.3.5 Factors influencing disclosures in forecasts: news content (H_{34})

Two methods of measuring news content in forecasts were used. Following Clarkson, Kao and Richardson's (1994) 'mechanical' approach, forecast results were compared with historic, previous year's earnings. The more common methodology of comparing forecast results and consensus analysts' forecasts was also applied. Both variables were analysed between good/bad or positive/negative depending on the difference between the forecast results and previous year's actual results/analysts' forecasts. There seemed to be a tendency to disclose good news.

<u>News variable</u>

Based on the 'mechanical' approach; and consistent with Clarkson, Kao and Richardson (1994), this research finds evidence of voluntary disclosure bias in favour of good news forecasts (20% classified as unfavourable, compared with 17.5% in Clarkson, Kao and Richardson (1994)).

There was a significantly different pattern between bidders and targets in the frequency of good news over bad news. Only 3% of bidders' forecasts were classified as bad news forecasts, compared with 25% of targets' forecasts. Targets were significantly more likely to disclose bad news compared with bidders. This is to be expected. Bidders are likely to be successful companies whose results are improving from year to year. Targets, on the other hand, are more likely to be experiencing trading difficulties (consequently, they are subject to takeover bids), giving rise to profits less than previous periods.

The rankings of differences in news content of forecasts were significantly higher for bidders than for targets, which suggests that bidders' forecast results are better, compared with previous performance, than targets' forecast results. There was no significant difference in mean rankings for the good news and bad news subsamples.

Forecast deviation variable

Based on forecast deviations, this research finds evidence of voluntary disclosure bias in favour of good news forecasts (only 42% classified as unfavourable). No significant difference was found in the frequency of positive and negative forecast deviations between bidders and targets. There was no significant difference in the mean rankings between bidders and targets for the forecast deviations variable as a whole, nor for the positive deviations subset. Mean rankings of negative forecast deviations were significantly higher for bidders than for targets. Thus, although targets are more likely to disclose bad news forecasts, when bidders disclose bad news (as measured by forecast deviation), it tends to be worse on average than targets' bad news.

Agreed and contested bids

News content variables were analysed between agreed and contested bids. Frequency of forecasts with positive deviations is significantly greater in contested bids. Good news forecasts are, as expected, more likely in contested bids than agreed bids. No significant difference was found for the news in the forecast variable (but forecast deviation is a better measure of news in the forecast).

In summary, in support of H_{34}, a tendency to disclose good news was observed. There was evidence that more good news was disclosed in forecasts than bad news. These results are consistent with US research findings. While there was a tendency to disclose good news in forecasts, there was evidence of disclosure of bad news in some forecasts.

8.4 Limitations of the research

Findings of this research study are limited by the very specific context of the research, namely takeovers, and are not directly applicable to more routine business situations. In addition, this research, like all research, is limited by the period and sample studied. Forecasting practices may change over time. There is evidence of a reduction in frequency of forecast disclosure in the later years of the study compared with earlier years.

Disclosure/nondisclosure of forecasts

This research provides useful data to firms involved in takeover bids. These firms may not be a representative sample of all firms in the population. The literature on prediction of takeover targets (for example, Palepu, 1986; Barnes, 1990) suggests that target firms have different characteristics from the population as a whole. Thus, the results of this study may not be applicable to a wider group of firms. In addition, one must consider the possibility that firms that forecast are not a random selection of firms. Thus, conclusions based on forecasting firms cannot be extended to nonforecasting firms.

Previous disclosure behaviour of firms may affect interpretations of disclosure/nondisclosure of forecasts in subsequent takeover bids. Whether or not a firm is a regular forecaster, and the quality of its previous forecasting, may affect how disclosures during takeover bids are received. As the tendency of UK firms is not to disclose forecasts, this limitation is not as great a problem as it would be in other jurisdictions.

Firms may differ on the forecastability and ease of forecasting of their profits (for example, bidders versus targets, larger versus smaller firms, firms in different industries). This, rather than disclosure decisions *per se*, may influence disclosure.

Content of disclosures in forecasts

When ranking firms on the quality of disclosure, it is assumed that the demand for disclosure is the same for all firms and that differences in disclosure are due solely to management's disclosure choices. However, the nature of a business and its complexity will also influence content of disclosures. Consistent with this view, the findings in this research provide some evidence of different levels of disclosure of assumptions for different industries in agreed and contested bids.

No adjustment is made in the research for items and assumptions in forecasts not disclosed because they were not applicable to those forecasting firms. Were it possible to identify items and assumptions applicable/not applicable to firms, a more accurate measure of disclosure content of forecasts would result. Notwithstanding the obvious practical difficulties, this has been claimed to have been done in annual report studies. Whether it is possible to properly cater for nonapplicability of items in annual reports is questionable; in the case of entirely voluntary profit forecast disclosure, it appears to be impossible to deal with nonapplicability of disclosures.

No distinction is made in the research between profit estimates (forecasts published after the forecast period end) and profit forecasts even though the City Code on Takeovers and Mergers says that a profit estimate relating to a period expired may only be subject to assumptions in exceptional circumstances. Most profit estimates included assumptions and are therefore treated similarly to profit forecasts in this research.

8.5 Suggestions for further research

The focus of this research is behavioural and supply-orientated, focusing on what motivates management to disclose forecasts. A shareholder perspective is an alternative approach. A share price reaction study could be undertaken to examine the relative share price behaviour before/after the takeover, using the market model and abnormal returns to identify whether the share price behaviour has been any different where there has been disclosure of profit forecasts. There are

difficulties, however, with share price studies. Share prices will not be available if the share quotation has been suspended during the takeover. There may be so many other events occurring during the bid that it may be difficult to isolate the share reaction as related specifically to disclosure of the forecast. Variability of newspaper coverage will also affect the share price reaction.

Agency costs during takeovers are likely to increase substantially, especially in target companies. Shareholders will be most concerned about the value of their shares whereas management will be most concerned about their job prospects, their earnings post-takeover and, to a lesser extent, the value of the shares. An analysis of the relationship between target management's job outcome after takeover and forecast disclosure could be undertaken to see if forecasts are used by management as an entrenchment tool.

Voluntary disclosure is one potential management response to valuation problems in public markets. Further research is needed to understand which voluntary disclosures are credible and how voluntary disclosure affects analyst and institutional investor interest in the firm. Usefulness to recipients of the information disclosed in profit forecasts, and the format of its disclosure, could be examined.

This research could be developed using the kind of case study methodology followed by Gibbins, Richardson and Waterhouse (1990, 1992). There could be a more participative research approach, whereby the researcher would take a role (either actively or as an observer) during a takeover, and at the same time observe the actions/decisions of management in relation to disclosure of profit forecasts. The interviews in this research were a more practical alternative to case studies in attempting to understand the motivations for disclosure during takeover bids.

Future research might extend the definition of outcome of bids to include shareholding structure in the target, methods of payment and bid premium.

Another researchable question is whether the forecasts disclosed are accurate. Measuring the accuracy of forecasts disclosed during takeovers is difficult. Dev and Webb (1972), amongst others, have pointed out the difficulty of examining forecast accuracy because of non-comparability of forecast results with actual results after the takeover. New managements are likely to adopt new operating policies and different accounting assumptions. In addition, they are unlikely to disclose separately the results of the companies taken over. Dev and Webb (1972) suggest that it is only when bids fail that forecast and actual profits are likely to be on a comparable basis. There were 12 forecasts made in respect of failed bids. A development of this thesis could examine the accuracy of these forecasts, subject to the additional caveat that there is evidence that management may attempt to fit actual results to the forecast after the takeover (Ferris, 1975).

Because the findings of the research are specific to the takeover context of the study and may not apply to nontakeover situations, future research might examine forecast disclosures in other contexts to re-examine some of these findings. The dominance of the takeover context on the results suggests that more research is needed to study disclosures in specialist settings. Frost (1995) has begun to look at disclosure choices by stressed firms in the UK.

8.6 Discussion and conclusions

This research is concerned with profit forecast disclosure during UK takeover bids. By choosing UK data, the research was constrained by the fact that UK companies rarely disclose periodic routine profit forecasts in, for example, their annual reports. Most research to date on profit forecast disclosure comes from the US and is based on routine management disclosure. It was to be expected that there would be a difficulty in making a direct comparison of these research results with research of factors affecting disclosure of profit forecasts in nontakeover, routine situations. If it had been possible to contrast UK data relating to routine forecast disclosure with forecast disclosure during takeovers, it might have been possible to demonstrate that different factors determine the decision to disclose, depending on the context.

The very fact that there is a significant level of profit forecast disclosure during UK takeover bids, while there is little of such disclosure in routine, periodical contexts, suggests intuitively that the major determinants in the decision to disclose profit forecasts during takeover bids are themselves takeover-specific. The same consideration raises the question as to why, in a market generally averse to routine disclosure of profit forecasts, companies involved in takeovers would overcome that aversion and publish their forecasts. In the circumstances, it was not unexpected that the research would suggest that profit disclosure decisions were affected by takeover-context factors. The research duly confirmed that these factors, rather than factors suggested by prior research, such as signalling theory and agency theory, affected the decision to voluntarily disclose profit forecasts.

The *a priori* analysis of motivations to disclosure profit forecasts, set out in paragraph 1.2, was based on the commonsense assumption that a decision on whether or not to disclose a profit forecast in the course of a takeover bid was likely to be profoundly influenced by a single dominant consideration - namely whether such disclosure would help or hinder the success of the forecaster, however success is defined. If success from the bidder's point of view is defined as completing the takeover at minimum cost, and if success, from the target's point of view, is defined as maximising the cost of the takeover so as to prevent it completely or, failing that, to maximise the return to target shareholders, than one would imagine *a priori* that any decision to disclose a profit forecast is taken predominantly by reference to whether disclosure will materially assist the forecasters' prospect of success.

Given a pattern of very rare routine disclosure of profit forecasts, prior research, largely based on routine disclosure, was unlikely to assist in an analysis of motivations to disclose profit forecasts during takeover bids. This is not to say that prior research is in any way invalidated by this research, in that the data did not provide strong confirmation of hypotheses based on signalling or agency theory. On the contrary, because there is a low level of routine profit forecast

disclosure in the UK one might well argue that weak confirmation of signalling and agency theory hypotheses in this research underlines their relevance to routine disclosure situations.

Moreover, the fact that there is a general culture hostile to routine disclosure of profit forecasts in the UK suggests that bidders' and targets' general motivation will be to make no disclosure unless there are very attractive or compelling reasons. If disclosure of profit forecasts were a routine feature of company behaviour, a decision to make a forecast in a takeover situation would not require any particularly strong motivation. Conversely, if strong motivation is needed to overcome a general reluctance to disclose profit forecasts, one would intuitively expect to find this confirmed by statistical analysis.

<u>The findings</u>

This research set out to examine five specific issues relating to disclosure of profit forecasts during takeover bids. Two takeover factors influenced the decision to disclose a forecast - type of bid and forecast horizon. Significantly more forecasts were disclosed in contested bids and where forecast horizon was shorter. In contested bids, whether the firm was a target substantially influenced whether a forecast was disclosed. Firm-specific factors (with some exceptions) did not appear to be influential.

There was some evidence from a small sample of readings that forecasts are more likely when market expectations are out of line with results, especially where the forecast is higher than market expectations.

No statistical evidence supports the proposition that bidders making forecasts influence the outcome of bids or that forecasting bidders are more likely to succeed than nonforecasting bidders. From the point of view of targets, there is clear evidence in contested bids that the use of forecasts by targets is effective in obtaining increased offer prices.

Content of disclosures in forecasts was influenced by takeover-context variables and by forecast-related variables. Type of bid, circumstances of making the forecast, forecast horizon and period forecast were significant in all (or nearly all) models tested. In contested bids, whether the forecaster was a target significantly increased disclosure of assumptions in forecasts. Firm-specific variables did not appear to influence disclosure content.

There is evidence supporting the good news hypothesis that more good news is disclosed than bad news in forecasts. There was a clear tendency to disclose good news forecasts. However, some bad news forecasts were disclosed. Targets were significantly more likely to disclose bad news. However, when bidders disclosed bad news it tended to be worse, on average, than targets' bad news.

This study underlines the inappropriateness of applying research based on general settings to more specialist environments. This research applied existing voluntary disclosure theory to the specialist setting of takeovers. Disclosure choices were dominated by the takeover context of the research. Two variables, type of bid and bid horizon, accounted for almost all the variation in disclosure. Many companies not normally disclosing profit forecasts were found to do so during takeover bids. In many cases, there was little evidence that such disclosure made a difference to the outcome of the bid (except for disclosure by targets in contested bids, when disclosure and offer price was related).

More research of specialist contexts is needed. Now that the takeover dominance has been identified, a deeper and more takeover-focused analysis is needed to more clearly tease out the underlying takeover factors driving disclosure decisions. A possible avenue of enquiry might be the analysis of the relationship between forecast disclosure and managerial welfare during/after takeover bids.

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Appendix 1: INTERVIEW OUTLINE

(This interview outline was used in interviews with directors, management and advisors of companies involved in takeover bids. Thus, its applicability to different interviewees varied. The questions are cross-referenced to the hypotheses being tested. (These cross-references were not included in the original questionnaire sent to interviewees.)

Hypotheses	Issue for discussion
	1. Outline purpose of research study.
	2. Stress confidentiality.
	3a. Were you ever involved in a bid where a forecast was disclosed?
H_1-H_{14}	3b. If 'yes', why was a forecast disclosed?
	3c. Did the company have sophisticated forecasting systems?
H_1-H_{14}	4a. Why do bidding companies involved in takeover bids generally not disclose a forecast?
H_3	(i) during uncontested bids
H_3	(ii) during contested bids
H_1-H_{14}	4b. Why do target companies involved in takeover bids generally not disclose a forecast?
H_3	(i) during uncontested bids
H_3	(ii) during contested bids
H_1-H_{14}	5a. Why do some bidding companies involved in takeover bids disclose a forecast?
H_3	(i) during uncontested bids
H_3	(ii) during contested bids
H_1-H_{14}	5b. Why do some target companies involved in takeover bids disclose a forecast?
H_3	(i) during uncontested bids
H_3	(ii) during contested bids

Hypotheses	Issue for discussion
H_2	5c. Of the companies that disclose a forecast during a takeover bid, why do more target rather than bidding companies disclose a forecast?
	6. Who/what is the most influential in the decision to disclose the forecast?
	• Other party to the bid
	• Board
	• Management
H_{10}/H_{11}	• Advisors
H_3	• Whether the bid is contested or not
H_{15}	• Market expectations of company profits
	• Regulations requiring a forecast
	• Other
	7a. To what extent are forecasts disclosed privately rather than publicly during bid negotiations?
	7b. Why, in an agreed bid, are forecasts disclosed publicly rather than privately?
	8. Are there any factors not already mentioned that influence the disclosure of forecasts during takeovers?
	9a. How influential is the fear of getting the forecast wrong?
	9b. What is most feared if the forecast is wrong?
	• Litigation
	• Reputation
	• Career/job prospects
	• The Takeover Panel
	• Other
	10. Which of the following is relevant in influencing the disclosure of a forecast?
H_6	• Size
H_8	• Extent of ownership of the company by management
H_7	• Leverage

Hypotheses	Issue for discussion
H_{34}	• News contained in forecast
H_{13}	• Industry in which the firm operated
	• Sophistication of forecasting system
	• Variability of earnings
H_1	• Economic conditions in which forecast was made
	• Age of the company
	• Other
H_{16}-H_{19}	11. In contested bid situations, do you think the publication of a forecast has a material influence on the outcome of the bid?
H_{20}-H_{33}	12. What influenced the extent of disclosure of the bases and assumptions underlying the forecast?
	13. Who else should Niamh Brennan talk to about this research project?

Appendix 2: EDITED SUMMARY OF INTERVIEWS

For ease of reference, each interview comment is numbered 1 to 162, to the left of the text. Letters A to K refer to each interviewee.

1. Factors influencing disclosure of profit forecasts (comments 1-103)

Case histories

X_1 plc (Forecasting target in a contested bid)

1 B: A large part of X_1 plc was held by X and we were on notice that a bid could arise. We were advising X_1 plc before the bid. X_1 plc published a forecast because we advised them to. The company decided on a major rationalisation programme the previous year and consequently knew it would be under threat of takeover. The company decided to spread the cost of the rationalisation over a number of years. They thought that this would be a good defence against a takeover bid. We advised them to take the full hit in the current year and to make sure that they over-provided rather than under-provided for the rationalisation costs. The basis for our advice was that we could forecast in a defence document on a year that had the benefits of rationalisation and none of the costs. Nine months later the bid occurred and we were in a position to make a forecast.

2 B: A number of factors influenced the decision. We were close enough to the year end to be able to predict the final outcome for the year. X_1 plc had very good controls. We were comfortable with making a forecast. The forecast was driven by the price being too low.

3 H: The managing director indicated that X_1 plc profits would touch £X million. This was deemed to be a forecast by the Stock Exchange. The bid document hyped this forecast up to £X+2 million. Initially it was just a verbal forecast. It was never reported on. It would have been very remiss of us not to provide a forecast, especially as the bid was contested, unless the forecast were to show a bleak picture. We would have to have informed the shareholders as to the out-turn for the year so they could make a judgement about the offer price.

X_2 plc (Forecasting target in an uncontested bid)

4 G: There were two reasons. First of all, for Stock Exchange reasons concerning the length of time since the last accounts were published. There is an obligation to give up to date information. There could have been, say, eight months since the company last published any information. Secondly, the shareholders needed to be put in possession of all the relevant facts. A lot had happened since the previous year end. We felt it necessary to provide the shareholders with the same information the directors and management had in making their judgement in relation to the bid. The market was a reasonable guide, but it wasn't enough. The bidder did not push for a forecast. They did not influence a forecast in any way.

X_3 plc (Forecasting bidder in an uncontested bid)

5 K: We approached the target with a view to merger (in effect) by means of a recommended offer. There was a simultaneous flotation as X_3 plc was an unlisted company taking over a quoted company. It was a long time since we had disclosed results. We disclosed a forecast because we were being listed. It was driven by the flotation rather than the acquisition. The interim results were published and audited in the prospectus, and we rolled in with a forecast for an additional six months. It was very easy for us to calculate earnings and we were happy to do it, as there was going to be a big jump in earnings from the previous year. The areas of potential for movement were fewer in our company. We were making a forecast in the last

quarter of the year and we already had audited results for the first six months of the year.

6 K: Once the terms were agreed in principle there was an expectation that the target would publish a forecast. It was proposed in the financial advisor's checklist that the target would give a forecast, but they came back saying that they did not want to give a forecast. The reason they gave was that they did not give a forecast when they had floated the company originally. That, and also that one of their non-executive directors did not want to be involved in a profit forecast. As it turns out, they (their advisors, accountants and merchant bankers) would never have been able to stand over a profit forecast. They would have had difficulty in producing forecast figures matching the numbers being given privately to us. Our financial advisors were happy to rely on brokers' estimates when a forecast from the target did not materialise.

<u>X_4 plc (Nonforecasting target in an uncontested bid)</u>

7 B: X_4 plc had agreed a fabulous price for the company. We didn't want to issue a forecast which might show up the generous price offered by the other side. Issuing a forecast wasn't an issue in the bid. The company wanted to take the money and leave quietly.

<u>X_5 plc (Forecasting target in an uncontested bid)</u>

8 B: X_5 plc was a recommended offer and probably issued a forecast to convince shareholders that the price was fair and reasonable, to convince the shareholders not to expect too much and to advise shareholders to accept the bid. It was a paper offer so the bidder's forecast was probably to support their share price. The issuing of a forecast by X_5 plc was not instigated by the financial advisors. The bidder would not make the bid without a forecast.

<u>X_6 plc (Nonforecasting target in a contested bid)</u>

9 I: A profit forecast was strongly considered. Our mentality was that, unless we could establish a clear benefit for publishing a profit forecast, there was no point in doing one. There was a lot of accountants around the table. One automatically associates a forecast with risk. And the automatic tendency is to stay away from a forecast unless clear benefits are obvious. If we had felt that a profit forecast would have led to any reasonable chance of the offer being increased or being overtaken by anyone else, then we would have published a forecast. But we believed neither. The bidder had gone to the top of its range.

10 I: There was no pressure from the bidder to make a forecast. The bidder had what they believed was an exceptionally good feel for the quality of the X_6 plc business and its profit stream. We gave them access to budget projections and much more financial information not normally available in a hostile bid.

<u>X_7 plc (Forecasting (involuntary) bidder in a contested bid)</u>

11 J: There were two levels of forecast. First we gave a profit warning for the year. The reason for doing this was that the management accounts indicated that the profits already exceeded brokers' forecasts for the company. We did a lot of soul searching before issuing the profit warning. We were afraid it would leak out. We were correcting analysts' forecasts. At the bottom of the profit warning statement we made an extra comment in relation to the following year. We didn't focus on the consequence of this at the time. It was a nice statement to include. As it turns out, this amounted to a profit forecast because we specifically referred to *'further growth in revenues and profitabilities'* for the following year.

12 J: This came back at us as the target's advisors drew the Stock Exchange's attention (we believe) to this statement constituting a profit forecast. This is standard practice in a bid. X_{10} plc used this as a delaying tactic. It makes life more difficult. It makes the directors more nervous. We had to get the auditors to report, and a cost factor was involved. It was relatively easy to forecast the business. The directors were happy that the forecast was sustainable. We only had to report, and the auditors only had to verify, that profit would be £1 more than the previous year. As such it was a harmless forecast.

13 J: The original statement would never have been made had the consequences been foreseen at the time. The paperwork involved to do a profit forecast is huge. Line management had to get involved in the bid. This is very disruptive to the business. There is a greater cost in taking up management time.

X_8 plc (Forecasting target in an uncontested bid)

14 A: X_8 plc issued a forecast to provide shareholders with information whether to accept the bid. The profits were not as good as the market was expecting.

X_9 plc (Forecasting bidder in a contested bid)

15 A: X_9 plc had a very chequered management and profitability experience. It had gone through a period of very poor profitability. X had to take over as chairman just before the bid and hadn't had time to show the market that the company had been turned around. It was essential to make a forecast to show the market the improvement that had been made. The pre-tax profit forecast was double the previous year's profits and was three times the previous year's profits after tax.

X_{10} plc (Nonforecasting target in a contested bid)

16 J: We found out afterwards when we had taken over X_{10} plc that a forecast was being prepared. I don't know what the major stumbling block was, but it subsequently issued a defence document without a forecast. I guess the board wasn't happy with going with the forecast. X_{10} plc hadn't lived up to previous budgets. I don't know whether the advisors were a problem. I imagine the lawyers were warning the directors on their legal liabilities.

X_{11} plc (Forecasting target in an uncontested bid)

17 I: A forecast was made even though the bid was not contested because X_{11} plc was well used to making forecasts. The forecast was not demanded by the bidder. We were doing forecasts every six months because of our need to raise capital frequently. The main reason was to let shareholders know they were getting full value for their shares. The offer was very generous. The forecast represented what we expected we would make and what in fact we did make in the end.

Reasons for disclosing forecasts

18 E: For the bidder the primary reason is to protect the price of securities, and the target to get best value for its shareholders.

19 H: You have a fiduciary duty as a director to be sure that the shareholders get value for their shares. If the company becomes aware of highly price-sensitive information that significantly affects the value of the shares, directors are supposed to get the information out on the market so that there isn't a false market about the potential of the company.

20 H: I cannot see a company put out a forecast that shows profits falling off. That can only reduce the price being offered. Directors are driven to ensure that, if they recommend that shareholders accept the price (whether the bid is friendly or unfriendly), they must be satisfied that they have secured the best price.

Reasons bidders disclose forecasts

21 A: The bidder may want to counteract the publicity concerning the quality of its earnings or the value of their shares. Making a forecast may be necessary to give credibility to the desire to take over the company. In the case of cash bids, a forecast is usually irrelevant for bidders but could be important in relation to the credibility of an offer in a local situation. In paper offers, if the paper is under attack, the bidder will want to support its paper. There is no negative PR about the share price in an uncontested bid so it is less likely the bidder will have to make a forecast.

22 C: This is relevant where paper is being offered. It is a way of demonstrating value in the bid. There can be debates about the quality of management which might come down to profit performance - both historical and forecast profits of the bidder compared to the offeree.

23 D: There may be particular circumstances to do with a particular bid why bidders would disclose a forecast in a cash bid. It may be if the bid is contingent on the bidder's own shareholders approving the bid and maybe there has been some dissatisfaction expressed by shareholders with the bid. It is not a standard event.

24 E: In an uncontested bid, a forecast might be disclosed to correct market perceptions that, say, a company appears to be paying a higher price for a target. In order to reinforce the confidence in the bidder, a forecast may in some circumstances help. There would be more of an inclination to give a forecast where there are securities or shares involved. If it is a cash offer, then it tends not to be a particularly important issue for the bidder.

25 G: Forecasts are disclosed if it is felt necessary to complete the transaction or to underwrite the value of the consideration. A forecast might be made to shut out contest from another predator rather than a target.

26 J: If their back was up against the wall in relation to relative share values, or if they thought the bid was going to fail, or if they were being attacked on the basis of performance, the bidder might publish a forecast.

Reasons targets disclose forecasts

27 B: It might be suggested in the negotiations that if the company makes a forecast to show its sincerity, the bidder will increase the price. The target might put out a forecast to entice shareholders to accept the bid.

28 C: The purpose of the forecast is so that the market or the shareholders are aware of the company's short term prospects. The bidder may force a target to make a forecast as a condition for making the offer.

29 C: I was involved as advisor in an uncontested bid where the target published a forecast because a non-executive director on the board would not agree to recommend the offer. When the forecast was published he then agreed to recommend the offer.

30 D: A forecast may be done as part of the price negotiation which may be subject to the offeree making a formal forecast. A profit forecast may be made in a hostile bid where the offeree is justifying a higher value for the company. A profit forecast is one of the only ways of communicating hard information to shareholders.

31 E: As far as the target is concerned, then it really doesn't matter whether it is shares or cash, the interest is to get the best price for the shareholders.

32 G: There are compelling reasons in some situations why targets should make a forecast: if there is a material change in the business since the last published statement or if there is a long lapse of time since the last public disclosure. Companies are required by regulations to give up to date information. Forecasts are disclosed to talk up the price and possibly encourage a third party to the arena. Shareholders get better value if there is a contested situation. Shareholder value is the most important element, but it is not the only element. For example, the welfare of employees is important. Management and directors act in the interest of a range of people, including shareholders, employees, suppliers, creditors, etc.

Reasons for not making a forecast

33 A: In general, companies will try to avoid making a profit forecast. Firstly, it is costly and secondly, it is time consuming, and thirdly, it may come back to haunt them.

34 B: A forecast might not be disclosed if the date of the bid was too far from the year end, or if systems were unreliable. The type of company will determine whether a profit forecast is made or not. Property companies will not make a profit forecast. They will be revising asset values. You should exclude property companies from your sample.

35 C: If the offeree board is satisfied with the terms, there is less need for the market to be informed. Companies cannot, for legal reasons, give a long term forecast as there is greater uncertainty in the case of a long range forecast.

36 D: This might arise because it is too early in the financial year. It might be because it is too difficult to forecast the profits of the company. It might be due to the exposure of the board, the merchant bankers, the directors. Merchant bankers may not be willing to sign off.

37 E: I suppose mainly uncertainty. Forecasting is quite useful but it has got to be quite bullish. Uncertainty and bullishness tend not to sit happily together and it is probably in those circumstances that forecasts don't go out, or if it is not going to tell people anything that will enhance prospects by the parties.

38 F: I suppose it is possible that the forecast isn't good and so they don't want to make a forecast which confirms the company *is* having some difficulty.

39 G: If it was close to the beginning of the year, very little would have changed and I would have advised the company not to make a forecast because of the dangers associated with making such a forecast.

40 H: Where the forecast shows a worse position than the historical earnings, or while the forecast shows a position better than historical profits, the profits are not sufficient on any multiple to match the price offered, or where the advisors cannot stand over the forecast due to lack of systems, a forecast will not be published. When a forecast is published, a ritual is gone through with the board and with lawyers to the company - every word in the forecast is gone through. Thus, in summary, whether a forecast is published or not is a function of what the forecast will say if we publish it; will it outperform the price or a multiple thereof? Have we got the systems to make the forecast?

41 J: The cost of the reporting accounting, the hassle, the aggravation concerning documentation, problems at board level. Most directors are reluctant to be involved in a forecast. No one wants to be caught out publicly in getting the figures wrong.

Reasons bidders do not disclose forecasts

42 B: Bidding companies do not normally make a forecast, especially if cash is offered, unless they want to keep the share price up or for reasons of credibility. In a paper bid, a forecast may be issued to support the price of the shares being offered and to value the bid higher. The bidder is always in control of the situation so it picks the best time to make the bid and therefore has less reason to make a forecast. It is a poor bidder that has to prop up its own share price.

43 F: Bidders might disclose to persuade target company shareholders what a wonderful company they would be becoming shareholder of. But the Code clearly says that if there is a cash offer by the offeror there is no need to report on a forecast because all you are offering the target company shareholders is cash. You don't need to know the future prospects of the offeror company when cash is on offer.

44 G: In cash bids there is no need, nor any point, in the bidder making a forecast. Where you are talking about a deal more akin to a merger, when both companies are large and there is a paper exchange, it may be necessary for the bidding company to make a forecast.

45 H: If it is a cash bid, why would a forecast be needed? A forecast might be put out to give the target shareholders comfort on the value of paper, to copper fasten the paper value offered by the bidder.

Reasons targets do not disclose forecasts

46 C: In general, as advisors, we wouldn't sign a forecast with a very long horizon if we weren't satisfied that the forecast was reliable. If the merchant bank thinks there is too much uncertainty, it will not sign off on the forecast. If it is too far out for a full year's forecast, we will consider a six month forecast instead.

47 G: Reasons why a target wouldn't make a forecast might be because management and the directors are so enthusiastic about the proposed transaction. If they feel the takeover is absolutely the right thing for the company, and for their own personal careers, they won't want any obstacle to be created to get in the way of the transaction.

Why do more targets than bidders disclose forecasts?

48 A: Bidding companies tend to be bigger and therefore tend to have firmer market ratings. The market expectations are more accurate. For a target company the takeover bid is a once off transaction. The target will take once off opposition to maximise value. Once taken over, the company is gone. If the company has good profits it will want to maximise value.

49 B: Target companies are not in control of the situation. Issuing a forecast is one plank to their defence.

Who or what is most influential in the disclosure decision?

50 A: The advisors are the most important. They are conscious of the shareholders need to be advised of any significant information. Also, the advisors will be advising the board concerning tactics. The other party to the bid is very important. What the other party is doing will encourage the target to make a forecast. The board at the end of the day will decide. The company will end up with a committee of the board, in consultation with the advisors, and this committee will really be making the decision. Whether the bid is contested is also important. You need to add in market expectations to your list.

51 B: The other party to the bid. Disclosing a forecast is an element of the negotiations and is a test of seriousness and sincerity of the target in making the forecast. Contested bids are an important influence. If the bid is not contested, you can give the information to the other side in private. Market expectations of company profits are also influential, especially if they are vastly out of line.

52 C: The advisors will have it on the agenda of things to discuss at an early stage in the process. If the bid is contested, a forecast is more likely. The accountants are involved in the decision as they give an opinion on the forecast. If the accountants cannot sign off, they will not go ahead with the forecast. The merchant bankers cannot sign off without the accountants.

53 D: The most important is the other party to the bid. Jointly the board and the advisors are influential. Management don't have any role except where there is overlap between management and presence on the board. The quality of the management affects the ability to deliver a profit forecast. But the management *per se* will not make the decision whether or not to disclose a forecast. In contested bids, forecast disclosure is more frequent.

54 E: It comes back to whether it is necessary and appropriate to get the best value for the shareholders. It is often suggested that this sort of defence is to avoid being taken over. That will be a motivating factor, but the obligation/responsibility of the directors is to get the best deal for the shareholders, so it all comes back to that issue.

55 F: The advisors (both merchant bankers and accountants) will put up a plan. The policy to defend is probably the merchant bankers. The accountants do more, what we call, rule 3 advice - advising the shareholders and board. The accountants will get involved in the number crunching because, although you might think that it is a good idea to use a forecast, the numbers may not warrant producing a forecast. Ultimately, the decision has to be that of the board.

56 G: The other party is normally not at all influential. The most influential is the board at the top of the tree, with the support of the advisors. I am not really distinguishing between the board and the management. A contested bid is a significant influence and market expectations could also be an influence.

57 H: The most influential item is based on getting the best value for shareholders. The board is put there by the shareholders to look after their interests. The board is therefore the most influential. The board is required by regulations to be properly informed. Therefore, directors surround themselves with advisors. The board will be advised by the advisors and by management who will also be influential.

58 I: Shareholder value - it must be. There must be some confident expectation of increasing shareholder value. All the other items you list are relevant factors, but must be subsidiary to the main issue of enhancing shareholder value.

<u>Factors within companies influencing disclosure</u>

59 B: Sophistication of the forecasting system, the variability of earnings, economic trends and industry are the most influential. All these items are interlinked. In making a forecast, the company will turn up every stone and get every last bit out of the forecast. It is a lot easier to shave up market expectations. If the market expectations of profits are increased by say 20%, we will only put in 15 - 17% increase in the document. If the forecast profits show a drop of 20%, we are more likely to put in a drop of 30%. It is easier to forecast upwards than downwards. I don't think the extent of ownership, size, leverage are important.

60 D: It is not a function of size *per se*. Size could be a proxy for good systems. Publication of a forecast is a function of the quality of the management and the sophistication of the system. The longer a company's history, the less volatile the profits. The extent of ownership of a company by management is undoubtedly important. You have to be careful of vested interest situations. Leverage is important because a small fluctuation in turnover will have a larger effect on net earnings where there is high leverage. Industry, the sophistication of the forecast systems, the quality of management, variability of earnings, economic conditions and the age of the company are all relevant factors.

61 E: The precondition of the forecast is sophistication of the forecasting system. I don't think age of the company will be an issue. The trade would be more important than the age of the company. Variability of earnings would probably be a factor of economic conditions. Industry factors come into that. In a very highly geared company, equity earnings will be subject to much greater variation and will make it more difficult to contemplate forecasting. I don't think the size of the company in itself is important, other than the extent to which it influences the sophistication of the accounting systems. There is always going to be nervousness where management actually own the company because clearly they have something to gain from the consequences of the forecast.

62 G: Size is a factor. Agency variables are not a factor in my experience. I agree with you that the stewardship function relating to agency theory is not so relevant in a takeover situation. I don't think industry is that significant. I would link sophisticated forecasting systems and variability of earnings. It depends on how good your systems are in taking variable earnings into account, given that you are probably only forecasting for four to six months of unknown information. Economic conditions are tied to variability of earnings. Management would not normally want to risk a forecast (or a bid) at a low point of the economic cycle. Age is another aspect of sophisticated forecasting systems.

63 H: Size and the extent of ownership of the company by management are influences. This depends on the people in question. In hostile bids, the one casualty you can be certain about is the management. In putting in a forecast in a hostile situation, the management would be wishing to put their best foot forward. The protection is the board where the board is not management dominated. Independent board directors are not given to putting their necks on the block for management. Markets don't like very variable earnings. Some companies have a bit of reserve accounting and smoothing. With volatile earnings a forecast is very difficult if not hazardous.

64 H: You cannot use economic conditions as an excuse for not making a forecast. You can build some into the assumptions. If the bid had taken place during the currency crisis, a forecast would have been very difficult. We would have had to put in assumptions about exchange markets. This would not stop the making of a forecast, but might result in including as benign assumptions as possible in the forecast.

65 J: Variability of past earnings was a problem for the target. They couldn't make a forecast in the end. Public companies only put out a forecast when they feel the market has incorrect information that should be corrected. All the items you listed could apply in some situations.

66 K: Variability of earnings is the main one. Our earnings are mainly fixed. This is linked to the industry we operate in.

Forecasting systems

67 A: Reasonably good systems are essential to forecasts. There has to be a reasonably good basis for the directors' assertion that profits are going to be what they say they will be. You couldn't make a forecast in a company that doesn't have proper reporting systems.

68 B: With a large company, there will be good accounting systems. With better systems, it is much easier to make a forecast. If the systems are bad, we have to do work to make up for those bad systems. The influence of outside events is important, but you can cover a lot of things in the assumptions. We will not attach our name if the systems and controls are not good, unless we cover ourselves in a big way.

69 G: The risks of being incorrect are multiplied by a huge factor in companies which don't have sophisticated systems. This is a good reason for not disclosing a forecast.

70 K: Such a thing is not a requirement given the nature of our business. We had a system, but making a forecast was very easy.

Advisors/accountants

71 B: The worse the advisors, the more likely a forecast. The board are unlikely to block a forecast if it has been supported by the management of the company and the advisors. Management are a blocking mechanism if they are unable to make a forecast. Boards of companies think that they have a say in what happens in a bid. In fact, it is the advisors who make the decision and call whether to make a forecast or not.

72 C: Merchant banks, by signing off on forecasts, take a lot of responsibility. Under the Takeover Code there is a lot of responsibility. Bankers don't normally like to take on additional responsibility for the fun of it. They are not driven by fees. The fees charged aren't necessarily governed by the presence of a profit forecast during a bid. I do not expect that you will find any relationship between the choice of advisors and whether or not there is a forecast. The choice of advisors normally arises from a long-standing relationship with a company. I do not expect that you will find, for example, a relationship between the big-six accounting firms and the presence or absence of a forecast. However, the fees that the accountants charge will increase significantly if a profit forecast is involved. I expect that you will find that smaller firms will be just as willing to give an opinion on a forecast.

73 D: I don't think it is true that advisors are driven by fees in recommending disclosure of a forecast. In a bid, there would be no extra fees specifically for a profit forecast. The fees are contingent on the success of the bid. A profit forecast will be used if it is helpful in this respect. If anything, all the advisors get from a profit forecast is increased exposure. You don't get paid specifically for the profit forecast.

74 E: The decision to disclose a forecast will not be made by the accountants. It will be decided by the merchant banks. The final determinant on whether there can be a forecast, of course, will be the reporting accountant, whether he can report on the forecast. I think it is not uncommon for there to be quite vigorous debates on whether or not it is appropriate for a forecast to go in. Very occasionally, a merchant bank will be very keen for a forecast but, if the accountants feel that it is difficult to support a particular forecast, then it won't go ahead.

75 F: I think it is a bit cynical to suggest that disclosure of a forecast is driven by advisors wanting fees. The advisors are employed to (let us keep it as a defence) to defend the company. If they defend the company successfully, they will have an on-going relationship with that company which will undoubtedly generate more fees as time goes by. I do not believe that disclosure is advisor prompted.

Other influences

76 D: It is not feasible to publish a profit forecast when it is too early in the year.

77 G: There could be situations where a company is making significant profits from a dominant customer. That company would not want the dominant customer to be made aware of the dominant contract with them; for example, a supplier to Marks and Spencer.

Disclosure of private information

78 A: In an agreed bid private disclosure is invaluable. If the forecast given privately varies significantly from market expectations, shareholders need to be told.

79 B: An indication of a profit forecast can be given privately to a bidder. If a hostile bidder comes along later, you must also give him the same information but only if he specifically asks for it. A private forecast is made regularly in agreed bids. This private information may need to be disclosed to persuade shareholders it is a good offer.

80 C: Under the insider dealing rules, the Stock Exchange has been clamping down on the extent that companies can guide analysts. No one should have information that the market as a whole does not have. Thus, guiding brokers is a dangerous game nowadays.

81 D: Yes, private information is disclosed all the time, but this has implications under the insider trading rules. Management are also more exposed now in tipping off brokers. Look at the Shanks McEwan case. The company was reprimanded by the Stock Exchange for communicating information privately to selected analysts. Rather than steering analysts' expectations, companies will come under more pressure to make announcements, for example, quarterly trading statements. I am not sure whether this has an impact on the frequency of formal profit forecasts.

82 E: There is a certain reluctance to disclose private information because, if it is disclosed to one party, it has to be disclosed to any other party that comes along afterwards. In an agreed takeover, where the possibility of another bidder emerging is regarded as remote, it is more likely.

83 G: This is a tricky area. If there is a bid for a public company, generally private information will not be disclosed. You cannot avoid disclosing forecasts privately (although you might want to do so). X_2 plc did not give a forecast. During the negotiations we talked of the potential earnings, but we were not dealing with specific figures. We had to be creative in talking up the earnings. There is a danger of giving people information not generally available to shareholders and making them insiders if they used the information.

84 H: The board should be giving information to all shareholders and should not be discussing it privately. You have to give a hostile bidder any information that you have given to a friendly bidder, provided the hostile bidder asks specifically for that information.

85 I: We were very conscious of the insider trading rules and also of giving information to one party and not disclosing it to the market in general. We created a file of information which we gave to every interested party. All got the same basic information and, over and above that, we responded to their specific queries.

86 I: Due to the length of time discussions with the bidder went on for, they got more information than the others. We put the bidder on notice concerning the insider trading rules. But in our opinion, the information was not price sensitive. However, we made the bidder sign an agreement that they would not trade in the shares during the period of our discussions and afterwards (if the discussions led to nothing).

87 K: The chief executive of the target essentially gave us a private forecast at an early stage, both before the terms of the takeover were agreed and at the meetings with the shareholders.

Influence of the fear of getting the forecast wrong

88 A: The advisors will always say that it is essential to meet the forecast and will be urging caution. They will advise that a margin of error will be built in to make sure that the forecast is achieved. As far as the board is concerned, it will want to pull out all the stops and make the forecast as certain as possible and, also, achieve its objective of beating off the unwanted bid. If the target beats off one bidder and subsequently fails to make its forecast, the market will not believe it next time round if a new bid comes up.

89 B: Pride and reputation are much more important than litigation. Fear of litigation is not in the decision to make the forecast, but affects the quantum of the forecast. It does not put one off making the forecast (except if systems and controls are not in place), but it will influence the degree of conservatism. Closeness to the year end is a very important factor. Fear of getting a forecast wrong has never been a reason for not doing a forecast.

90 E: Takeover really gets you much closer against the wire because the directors would be failing in their obligation to the shareholders if they put in a fuzzy, low forecast. So somehow you have got to get it right.

91 G: There is quite a fear of litigation, but in the final analysis, if you have to make a forecast, you do so. You try to broaden the assumptions which are published with the forecast to get off the hook as much as possible.

92 H: I don't think it looms largely. Advisors are very sensitive about it. The reputation of the advisors is on the line.

93 I: Yes, the fear of getting the forecast wrong is influential. What is feared, or what the consequences are of not meeting the forecast, I'm not really sure of.

94 K: It was not influential. Neither the financial advisors nor the accountants would have put their names to the forecast if it wasn't OK. In our type of business unless something very untoward happened, there was no problem with making a forecast. We pulled back a little to leave a buffer in case of trouble.

What is most feared if the forecast is wrong?

95 A: You can get the forecast wrong both ways - overforecast as well as underforecast. One is nearly as bad as the other. From the advisors point of view, reputation is important, and this is tied in with the reaction of the Takeover Panel and with litigation. From the company's point of view credibility rather than reputation is important.

96 A: The management of companies under threat of takeover are in a very difficult situation. If it gets down to haggling over price, the management would not want to put down a forecast which under their new masters would not be made.

97 B: The fear of litigation is there. But a greater fear is the fear of the Panel and the effect that a missed forecast will have on the business. A missed forecast may lead to a Takeover Panel enquiry.

98 D: Litigation is feared, as is the reputation of the advisors. It is very rare that it could be shown that there has been negligence. Irrespective of negligence, there would be press commentary if the forecast is not achieved. It is not an individual decision to disclose or not disclose a forecast, so career/job prospects are relatively unimportant. The Takeover Panel is not really that important.

99 E: All the major merchant banks are extremely responsible when it comes to forecasting. One would not be associated with a dodgy forecast. We live in a litigious world. I think it probably comes down to reputation, because reputation can be affected simply by getting it wrong, but that has the potential consequence of litigation and being criticised by the Panel.

100 F: Obviously before the forecast is published it is crawled over. When it is published, people expect it to be accurate. So whether there is a fear of litigation, I don't know. I would have thought they would have hoped it would have been considerably reduced.

101 G: Advisors fear litigation as they seem to be the ones that get sued. The company fears its reputation, and management its job prospects. There isn't much precedent for target companies getting sued, as the bidder by this stage owns the target. In effect, it would be suing itself. Therefore you have a go at the advisors instead.

102 H: This depends on how wrong the forecast is. Any prudent board will try to put in as many assumptions as possible to cover themselves. What is even as important, apart from the forecast, is the attack on their performance. You cannot do that unless you have a source for that attack. This leaves one equally open to litigation.

103 J: Litigation is hypothetical. It is a big fear, but you don't know if it is going to happen. In terms of press comment *vis-à-vis* the board, reputation is a very high factor. Indirectly, career is relevant as eventually heads will roll if the forecast is bad enough.

2. Influence of market expectations (comments 104 - 115)

104 A: The only reason is to support/justify the share valuation. Market expectations are also important. If the information in the market is not accurate, you need to convince the market concerning the share price. This is done with a profit forecast. Any results that are very much out of line with market expectations need to be communicated with the market.

105 A: Bidding companies tend to be bigger and therefore tend to have firmer market ratings. Their market expectations are more accurate.

106 A: X_8 plc issued a forecast to provide shareholders with information whether to accept the bid. The profits were not as good as the market was expecting.

107 B: The forecast was significantly higher than brokers had been led to believe and were expecting. X_1 plc had failed to meet brokers' expectations on previous occasions. We had the offer document and could show that the profits would be a lot higher than in the offer document. We knew that the extra profits forecast would blow the bid out of the water. The information in the offer document, in press remarks and rumours generally, will drive whether a forecast is made or not.

108 D: On the offeree side there are generally two reasons for disclosing a forecast. Firstly, if its performance is unlikely to match that anticipated by the market, the board may recommend acceptance of the offer and may provide a forecast justifying reasons for accepting a low offer compared to expectations.

109 E: What is the market expectation of the current position of the company? Is it important to the bid that that impression be changed? Will a forecast, rather than a general description and information, add anything to market perceptions? If the brokers' estimates are roughly in the right ball park, you don't need to do an awful lot to change or correct them. You could hypothesise that 80% of brokers' estimates are probably on the mark. Then there is no need for the publication of a forecast. Where the company perceives the market not to have a true feel for its potential, or the brokers' estimates to be on the low side, a forecast would certainly be something which the directors look at.

Reasons for not making a forecast

110 D: To make a formal profit forecast and to get the accountants to sign off might involve too much of a contingency which could lead to the forecast decreasing profits relative to analysts' forecasts/expectations.

111 G: The making of a forecast (especially where the bidder is much larger than the target) involves the forecast going out to a much larger audience of shareholders. This results in changing expectations of a much wider group than just the target.

Factors within companies influencing disclosure

112 A: The news contained in the forecast is the most relevant item. The more variable the earnings, the more likely they are to be out of line with market expectations, and the more likely there is to be a forecast. Companies with characteristics such as good PR, where the management are able to sell themselves, will not need to make a forecast as market perceptions will be generally correct. These are likely to be larger companies. So that larger companies are less likely to make a forecast. With variable earnings, it is more difficult to forecast but it is more imperative to do so. The imperativeness more than counterbalances the difficulty with forecasting.

Disclosure of private information

113 A: In an agreed bid private disclosure is invaluable. If the forecast given privately varies significantly from market expectations, shareholders need to be told.

114 D: Rather than steering analysts' expectations, companies will come under more pressure to make announcements, for example, quarterly trading statements. I am not sure whether this has an impact on the frequency of formal profit forecasts.

115 G: A company's market expectations depend on how well you guide them. This has become a very tricky area since the legislation relating to insider information being disclosed selectively to selective groups. It is much more difficult now to manage brokers' forecasts. This has now become a blunt instrument. How can you guide market expectations without giving insider information?

3. Defensive role of profit forecasts (comments 116 - 136)

Is the forecast an effective weapon?

116 A: Yes, you should see higher bid premiums for targets that make a forecast. Making a forecast, however, does not necessarily mean that there will be an increase in premium. Which is cause and which is effect? I'm not sure. It is only because the forecast is a reflection of the underlying facts about the company which are not previously known. The forecast is correcting a perception, but is not changing the underlying facts about the company.

117 A: The target is not going to make a forecast unless it is to its advantage. The objective in making a profit forecast is to beat off the bid or to increase the perception of value. If the reason for defending the bid is that the value is too low, a profit forecast is much more likely to prove that the bid undervalues the company.

118 B: Yes, by the target; less so by the bidder. A company will only make a forecast if it is going to make a material difference.

119 C: Yes, it is very effective. The market effectively values a company on its view of current and future earnings. The bidder will leave a price increase to after the forecast. It is difficult to say whether the forecast made a difference because you don't know how much of the price increase relates directly to the publication of a forecast. The forecast is an effective weapon as it lets the market know what the profits are. The forecast is usually above market expectations.

120 C: The target company's management hadn't performed well. The target made a forecast and the defence was unsuccessful. It was a long range forecast and consequently lacked credibility in the market. It was not as effective a weapon because of what the market thought of the management, and the long range nature of the forecast did not help. I say this with the benefit of hindsight.

121 D: In a hostile bid, the forecast is a weapon. For example the BTR - Pilkington bid. Pilkington made a very robust profit forecast. BTR lapsed the bid. (There were other reasons for lapsing the bid.) The trigger point was the profit forecast. The profit forecast certainly is a weapon, more usually in hostile situations. It is used on both sides. It is a weapon for the offeror where there is a share exchange. It is effective if used properly. It would be difficult to prove its effectiveness directly. The only way to test it is to look at share price movements following the announcement of a profit forecast. Look at how much focus is given to the profit forecast by the media.

122 D: It is not so much the detailed information as the headline news value of the forecast that is most effective. It is the sentiment being communicated, not specifically the detailed information in the forecast.

123 E: The publication of a forecast is more likely to have an effect on the price than on success or failure. In the case of a target it will be primarily driven by the desire to block out the bid, and if that is not successful, then getting a much higher price. If it influences the price sufficiently, that can actually influence the outcome. Although it may be one of the factors which influence the outcome, it is unlikely to be the primary influence.

124 F: Forecasts may be disclosed infrequently because they are not seen as very effective weapons by the people making forecasts in those particular cases. Weapon may be an emotive word. There is the argument that shareholders receive volumes of information from both companies so there will be a number of factors which are relevant to success or failure. A profit forecast is one of the factors.

125 F: It has to be the information in the forecast rather than the disclosure *per se* that is most persuasive. Any forecast is going to give certain bits of information which the shareholder will absorb in making the decision.

126 G: Yes, it can be, but not always. It can be a useful weapon in leveraging up the price. That is its main potential advantage.

127 H: No, I don't necessarily think that it is, unless the forecast says something really surprising. A forecast is generally not material and will not on its own defeat a hostile bid. It might only make the aggressor more aggressive. I don't know of any forecast that has defeated a bid. If I was the aggressor, I would attack the forecast.

128 J: I don't know. It could affect price in a well organised situation where the forecast is made carefully.

129 K: Yes, forecasts appear to be used as a reasonably successful way of sending off a bid, increasing the price and turning hostile bids into recommended bids.

Q: Some people argue that a forecast is almost useless as it is made so near the year end and is so short term?

130 C: I disagree. It indicates to the market what the current trading or performance of the company is. Forecasts can be made up to six months before the year end. A forecast will lack credibility for a period any greater than nine months from the year end.

131 E: Short term forecasts probably are of use because they put into the public domain in an official way the next year's profits. There will be circumstances where that is helpful.

132 F: That's a good question because I think very few offerors would say that they are buying the company for one year's profits. They are obviously looking at the company as a going concern for many years into the future. So what relevance is one year? Well, it can depend, I suppose, on where in the cycle a target company, or indeed an offeror company, is. So it may give shareholders a feel for which way their company is moving.

Other strategic reasons for disclosure of a forecast

133 B: Disclosure in a takeover situation is very different to annual report disclosures. Annual report disclosures are disclosures of record. In a takeover situation, the disclosures are tactical disclosures.

134 C: In a contested takeover there is a debate about the consideration, so the timing of the forecast, and the fact that a forecast is made, are bound to be driven by strategic motivations. A forecast can be important in the effect it has on the other side.

135 C: The timing of the forecast depends on the circumstances. If you have a choice of arguments, you won't use them all at once. The shareholders will get bored after the first one or two documents. A drip feed approach is used which can be quite useful to keep peoples' attention. You issue new stories at regular intervals. During the bid, the timing of disclosure was measured. The forecast was not included in the first defence document. I think it was in about the third circular. Each circular had a different theme. We kept these themes going for public and shareholders' attention. We decided to keep our powder dry and to keep points back for the full period of the bid which was approximately 60 days.

136 E: Where it is a strategic decision, it will come back to judgements as to whether or not the market has the right perception of the business. A strategic reason for disclosing a forecast can only be to correct a wrong impression in the market.

4. Factors influencing disclosures in forecasts:content analysis (comments 137-149)

Detail in the forecast

137 B: X_2 plc's forecast contained considerable detail, thus greater protection for the advisors. We showed the calculations so that if the forecast wasn't achieved, there was a way out. If it was said that the forecast wasn't achieved, we could point to the reasons because we had disclosed the calculations.

138 B: I disagree that the more detail disclosed in the forecast the better the forecast. It depends on the caveats that are inserted in the forecast. The only number that matters is the bottom line. Disclosing a lot of figures leaves you wide open to attack from the other side and is only a matter of optics. It suggests that a lot of work went into the forecast but, on the other hand, the forecast may contain a lot of caveats which reduce its usefulness.

139 H: I would prefer a forecast with a lot of detail. It gives a better explanation to readers and more protection to the forecaster. However, the more assumptions, the more excuses are provided for getting the forecast wrong. This affects the validity and credibility of the forecast. If I saw a one line forecast, I would query how that forecast was obtained and I would be a little bit hesitant about it.

Assumptions

140 B: Forecasts that contain no assumptions are of more value than those that have lots. These provide protection to advisors, the board and management. The press pay very little attention to these disclosures. Forecasts with few caveats are much more useful. Assumptions introduce doubt into the forecast. There are a number of very similar standard assumptions used in forecasts. The ones to be interested in are those specifically related to the company. Advisors will choose assumptions and bases that give the best result for the company. Specific assumptions are chosen to give particularly good results.

141 C: Choice of assumptions is a joint decision between the company, the accountants and the merchant bankers. The Takeover Panel has rules on what can be assumed. A forecast with no assumptions is preferred, other things being equal. It gives a better impression of certainty that the forecast is achievable. You look to see the really sensitive assumptions. I prefer a more detailed forecast because I think there is less scope for fancy footwork. At the end of the day, what is achieved is the most important consideration. Some forecasts exclude items (e.g. bid defence costs). Exclusions that give the ability to load costs are an area for concern.

142 E: The Stock Exchange has precise rules as to what is allowed and not allowed. There will always be assumptions. I would be very surprised if you can show me many that have other than a few bland assumptions, because the Stock Exchange permits only external assumptions. All the interesting assumptions are the ones that are not published. Items under the control of management cannot be published as an assumption.

143 F: Where the Takeover Panel feels that the assumptions are inappropriate, we get companies to delete the assumptions. If there are assumptions going into the forecast that the company feels should be discussed with us, then certainly they do consult with the Panel. The assumptions, rather than the quantum, are discussed.

144 F: I don't think the Panel is influential in the decision to disclose. We might veto use of an assumption but I doubt that this is a determining factor in whether or not a forecast is published. It may have an impact on what you can record.

145 G: The Takeover Panel prevents you from putting in assumptions which would make a nonsense of the whole forecast. You can deal with key factors such as strikes, interest rates, etc. Factors outside your control can be put in as assumptions. There are twin influences in the extent of disclosure of bases and assumptions - the protection influence and the regulatory influence - to give people the necessary information and, at the same time, to protect the makers of the forecast. The advisors play a key role in deciding on the assumptions and bases, but the board and management know what the critical elements in driving the business are. It is a dialogue between those groups.

146 H: A huge number of assumptions underlie the forecast. When you do a forecast, you don't get into detail as this queries the validity of the forecast. You get down to a group of items so basic that the company cannot know about them in advance, which will affect the forecast. Companies can assume the forecast out of credibility. Assumptions vary from industry to industry. The more assumptions (provided they are not put out to abuse the forecast) the better, as they enable the reader to assess the prudence/validity of the forecast. They also extend protection of the board.

147 I: We always had major problems with the advisors in this area. All our first draft forecasts spelled out the real material assumptions but by the time the forecast got published, these assumptions had become meaningless and were converted to fairly standard assumptions. The real assumptions affecting the company get compromised and standardised. The advisors go to great trouble to standardise the assumptions. This makes it very hard for investors to understand and appreciate the forecast. For our own security, we went to great lengths to spell out the assumptions in detail but the advisors watered down everything, and by doing so created risk. If a forecast goes wrong, one has a problem if one can't point to which assumptions failed. By using conservative assumptions, we could have made the forecast look as bad as we liked in order to persuade the shareholders to accept the bid. I would have more confidence in a forecast with no assumptions. I would regard no assumptions as being an underwriting of the forecast. Assumptions are caveats, get-outs.

148 J: There were no real changes to the assumptions but we had to do further documentary work. The accountants reviewed the accounting policies and calculations. Very little was disclosed as far as bases and assumptions, as this was an involuntary forecast.

149 K: We disclosed assumptions to the extent we needed to have caveats in case something went wrong. We looked at the variables that could have affected the forecast, especially those that could have affected it adversely. It was a combination of that and what the merchant bankers and accountants wanted. We kept the assumptions to a minimum as far as I can recall.

5. Factors influencing disclosures in forecasts: News content (comments 150 - 162)

150 A: The news contained in the forecast is very important. If the forecast contains bad news, it will not be given unless it is only fractionally down on expectations.

151 A: If there is local opposition, it is always a good news forecast in a contested bid. Good news can be relative. If the market, for example, is saying that profits will be halved and if the drop is not so much, you might make a forecast.

152 B: A forecast would not be disclosed if profits were going to be lower than market expectations.

153 B: A forecast was made to show the shareholders that there wasn't a rosy future ahead for the company. The forecast contained bad news. Bad news was put into the forecast to persuade the shareholders that this was a good deal. It had nothing to do with getting a good price.

154 C: Whether forecasts disclose good or bad news depends on whether the company has good news in reserve. The forecast is usually above market expectations. It is open to the other side to attack the profits in the forecast; for example, if the company's profit margin increased for no obvious reason. If the news is very bad in a contested situation, there might be more pressure and less inclination to make a forecast. Not disclosing a forecast casts doubt on the profitability.

155 D: The news contained in the forecast is definitely important. The company will want to get poor performance news into the market. It might have to make a formal profit forecast justifying reasons why the board recommends shareholders to accept the offer.

156 E: I think the forecast would either be giving good news, or trying to contain bad news. If there is such uncertainty surrounding the circumstances, then a forecast would not be the way in which a company would go. The company would deal with the matter through discussion of the actions that would be taken to contain the problem. Directors would not wish there to be an incorrect impression as to the true position of the company, even if there is bad news to be disclosed. It's a little difficult to know precisely when there is a need for the release of information to correct an impression in the market, because you can never be absolutely sure what the impression is that the market as a whole has.

157 E: It is a criminal offence, under Section 47 of the Financial Services Act, to create a misleading impression that gives rise to a false market in securities: for example, if the directors have (or have previously) released information that gives the impression of how things are going to turn out. If they now know things are going to turn out to be very different, they are under a legal obligation to correct that impression. So, in some cases, news drives disclosure of information.

158 F: I can think of one or two cases where bad news was disclosed, where a scorched earth policy was adopted. Say offeror A announces an offer for company B, but needs to go to its own shareholders to get approval for the issue of new shares. Company B knows it is going through a bad time, and may indeed already have indicated something like that to its own shareholders. Company B comes out with a forecast which is even worse than the market is anticipating. The hope is that the offeror shareholders will, as a result of the forecast, question the judgement of their own management and not agree to the issue of new shares. It puts an onus on the offeror to justify why it is making the offer. It might also give the offeror the opportunity to invoke a material changes condition, which is one of the standard conditions in offer documents, which allows the offeror to withdraw from the offer if there has been a material change at the time of the offer.

159 F: The only legal or regulatory obligation to disclose bad news is that a company must follow the continuing disclosure obligations of the listing requirements. The Code says that all relevant information has to be given to shareholders to enable them to make an informed decision. But the continuing requirements of listing really have to be the barometer which decides whether or not information should be disclosed.

Reasons targets do not disclose forecasts

160 A: You will never get a target in a contested bid making a bad news forecast. The target will be trying to make the best case and putting the best foot forward.

Factors within companies influencing disclosure

161 D: News is an influence on disclosure. Management is taking a risk unless it has signalled bad news to the bidder. This is especially true if management end up continuing to work with the bidder's organisation.

162 H: News contained in the forecast is also an influence. There is not much point in disclosing bad news.

Appendix 3: FULL OUTPUT OF STATISTICAL ANALYSES

Table A3.1 Crosstabs analysis of categorical variables - forecasters and nonforecasters

The data in this table form the basis for table 6.2

	Forecasters	Nonforecasters	Total
Party to the bid			
Bidders	47 (25%)	654 (54%)	701 (50%)
Targets	141 (75%)	560 (46%)	701 (50%)
	188 (100%)	1214 (100%)	1402 (100%)
Pearson chi-square (d.f. 1) 54.28 Significance 0.00			

	Bidders		Targets	
	Forecasters	Nonforecaster	Forecasters	Nonforecasters
Year				
1988	20 (43%)	171 (26%)	43 (31%)	148 (26%)
1989	8 (17%)	179 (27%)	35 (25%)	152 (27%)
1990	10 (21%)	130 (20%)	31 (22%)	109 (20%)
1991	5 (11%)	110 (17%)	19 (13%)	96 (17%)
1992	4 (8%)	64 (10%)	13 (9%)	55 (10%)
	47 (100%)	654 (100%)	141 (100%)	560 (100%)
	Pearson chi-square (d.f. 4) 7.23 Significance 0.12		Pearson chi-square (d.f. 4) 2.23 Significance 0.69	
Type of bid				
Agreed bids	30 (64%)	512 (78%)	69 (49%)	473 (85%)
Contested bids	17 (36%)	142 (22%)	72 (51%)	87 (15%)
	47 (100%)	654 (100%)	141 (100%)	560 (100%)
	Pearson chi-square (d.f.1) 5.23 Significance 0.02		Pearson chi-square (d.f.1) 81.07 Significance 0.00	
Purchase consideration				
Cash	4 (9%)	334 (52%)	73 (52%)	265 (48%)
Paper	25 (54%)	167 (26%)	30 (21%)	162 (29%)
Cash and paper	17 (37%)	146 (22%)	37 (27%)	126 (23%)
	46 (100%)	647 (100%)	140 (100%)	553 (100%)
Missing values	1	7	1	7
	47	654	141	560
	Pearson chi-square (d.f. 2) 2.63 Significance 0.00		Pearson chi-square (d.f. 2) 3.53 Significance 0.17	
Financial advisors				
Higher reputation financial advisors	20 (81%)	239 (38%)	106 (75%)	330 (59%)
Other financial advisors	27 (19%)	385 (62%)	35 (25%)	227 (41%)
	47 (100%)	624 (100%)	141 (100%)	557 (100%)
Missing values		30		3
		654		560
		Pearson chi-square (d.f.1) 0.33 Significance 0.56		Pearson chi-square (d.f.1) 12.18 Significance 0.00

Table A3.1 Crosstabs analysis of categorical variables - forecasters and nonforecasters (continued)

	Bidders		Targets	
	Forecasters	Nonforecaster	Forecasters	Nonforecasters
Reporting accountant				
Big-six auditors	33 (70%)	250 (73%)	106 (75%)	327 (65%)
Other auditors	14 (30%)	91 (27%)	35 (25%)	178 (35%)
	47 (100%)	341 (100%)	141 (100%)	505 (100%)
Missing values		313		55
		654		560
	Pearson chi-square (d.f.1) 0.20		Pearson chi-square (d.f.1) 5.42	
	Significance 0.65		Significance 0.02	
Listing status				
Quoted	38 (81%)	293 (45%)	141 (100%)	560 (100%)
Unquoted	9 (19%)	361 (55%)		
	47 (100%)	654 (100%)	141 (100%)	560 (100%)
	Pearson chi-square (d.f.1) 22.86		Not applicable	
	Significance 0.00			
Nationality				
UK companies	43 (92%)	464 (71%)	138 (98%)	547 (98%)
Irish companies	2 (4%)	11 (2%)	3 (2%)	11 (2%)
Other nationalities	2 (4%)	179 (27%)	0 (0%)	2 (0%)
	47 (100%)	654 (100%)	141 (100%)	560 (100%)
	Pearson chi-square (d.f.2) 13.20		Pearson chi-square (d.f.2) 0.52	
	Significance 0.00		Significance 0.77	
Industry				
Capital goods	7 (19%)	86 (27%)	32 (23%)	91 (19%)
Durable goods	8 (22%)	30 (9%)	13 (10%)	80 (16%)
Non-durable goods	7 (20%)	81 (25%)	38 (31%)	134 (28%)
Banks and financial	6 (17%)	48 (15%)	10 (9%)	83 (17%)
Other	8 (22%)	75 (24%)	34 (27%)	97 (20%)
	36 (100%)	320 (100%)	127 (100%)	485 (100%)
Missing values	11	334	14	75
	47	654	141	560
	Pearson chi-square (d.f.4) 6.22		Pearson chi-square (d.f.4) 12.67	
	Significance 0.18		Significance 0.01	

Table A3.2 Mann-Whitney U tests of differences in mean rankings between forecasters and nonforecasters for each continuous independent variable

The data in this table form the basis for table 6.1

	Full sample				Bidders only				Targets only			
	Mean F	rank NF	*Z*-stat.	Two-tailed prob.	Mean F	rank NF	*Z*-stat.	Two-tailed prob.	Mean F	rank NF	*Z*-stat.	Two-tailed prob.
BHOR	647	485	-5.69	0.00**	207	293	-3.42	0.00**	271	355	-4.57	0.00**
VAL	187	669	-7.01	0.00**	460	342	-3.85	0.00**	440	326	-6.03	0.00**
REV	645	599	-1.62	0.11	227	276	-1.96	0.05*	426	310	-6.26	0.00**
TA1	637	596	-1.48	0.14	232	278	-1.86	0.06	408	308	-5.56	0.00**
TA2	659	625	-1.18	0.24	250	298	-1.83	0.07	415	316	-5.38	0.00**
LEV	634	595	-1.42	0.16	253	277	-0.08	0.93	372	314	-3.19	0.00**
MO	471	550	-4.08	0.00**	206	243	-1.61	0.11	267	340	-3.96	0.00**
NO.SSH	330	331	-0.08	0.94	96	105	-0.70	0.49	233	226	-0.47	0.64
SSH	343	375	-1.50	0.13	104	146	-2.35	0.02*	234	226	-0.53	0.59

Table A3.3 Bivariate Spearman correlations of independent variables - bidders

The data in this table form the basis for table 4.11

	D1989	D1990	D1991	D1992	BID	DCASH	DPAPER	DMIXED	BHOR	VAL	REV	TA1	TA2
D1988	-0.37**	-0.31**	-0.27**	-0.20**	-0.01	0.00	0.03	0.06	0.05	0.07	-0.02	-0.01	-0.00
D1989		-0.30**	-0.27**	-0.20**	0.02	0.02	-0.03	0.01	0.02	0.13**	-0.03	-0.03	-0.00
D1990			-0.22**	-0.16**	-0.04	0.05	0.05	-0.04	-0.08*	-0.03	-0.08	-0.01	-0.04
D1991				-0.15**	0.02	-0.02	-0.02	-0.01	0.02	-0.13**	0.02	0.01	0.03
D1992					0.02	-0.08*	0.07	-0.04	-0.02	-0.08*	-0.05	-0.03	0.01
BID						-0.03	-0.09*	0.02	0.03	0.28**	-0.01	0.16**	0.14**
DCASH							0.08	0.45**	-0.03	0.04	0.24**	0.27**	0.26**
DPAPER								0.52**	0.12*	-0.11**	-0.35**	-0.32**	-0.31**
DMIXED									0.07	0.08*	-0.10*	-0.04	-0.05
BHOR										0.03	-0.01	0.08	0.08
VAL											0.45**	0.53**	0.52**
REV												0.76**	0.71**
TA1													0.96**

* Significant at < 0.05 ** Significant at < 0.01 No. of cases varied depending on availability of data on each pair of variables

Table A3.3 Bivariate Spearman correlations of independent variables - bidders (continued)

	LEV	MO	SSH	MB	AUD	QUOTED	DCAPGDS	DDURGDS	DNONDUR	DOTHER	DFIN	DNAT
D1988	-0.09*	-0.04	-0.01	0.14**	-0.07	0.17**	0.06	0.06	0.01	-0.06	-0.06	-0.14**
D1989	0.07	-0.00	0.09	0.05	0.16*	-0.09*	-0.02	-0.02	0.09	-0.06	-0.00	-0.02
D1990	0.10*	0.04	0.00	-0.11*	-0.09	-0.09*	-0.11	-0.04	0.03	0.12	-0.00	0.15**
D1991	-0.01	0.00	-0.06	-0.06	0.02	0.01	-0.02	-0.03	-0.05	0.08	0.02	0.03
D1992	-0.10*	0.02	-0.05	-0.06	-0.04	-0.00	0.10	0.02	-0.12*	-0.07	0.08	-0.01
BID	-0.00	-0.16**	-0.12*	0.13*	0.05	0.07	0.04	-0.05	0.03	-0.03	0.01	-0.05
DCASH	0.07	-0.09	-0.02	0.01	0.12*	-0.14**	0.00	-0.03	0.10	-0.04	-0.05	0.14**
DPAPER	-0.18**	-0.17**	-0.31**	-0.01	-0.08	0.43**	0.04	0.03	0.00	-0.04	-0.04	-0.39**
DMIXED	-0.11*	-0.26**	-0.32**	0.10*	0.02	0.32**	0.03	0.02	0.06	-0.05	-0.06	-0.26**
BHOR	-0.01	-0.15*	0.00	0.11*	0.02	0.09*	0.09	0.07	-0.05	-0.11*	0.02	-0.08
VAL	0.12	-0.40**	-0.31**	0.35**	0.10*	0.10**	0.06	-0.07	0.03	-0.02	-0.03	0.13**
REV	0.38	-0.49**	-0.33**	0.20**	0.20**	-0.21**	0.15**	0.01	0.03	0.01	-0.27**	0.40**
TA1	0.34**	-0.59**	-0.29**	0.30**	0.23**	-0.09*	0.06	-0.10	0.04	-0.02	-0.02	0.29**
TA2	0.19**	-0.60**	-0.31**	0.30**	0.20**	-0.07	0.05	-0.07	0.05	-0.08	0.03	0.25**
LEV		-0.13*	0.05	-0.07	0.11*	-0.15**	-0.07	-0.07	-0.02	0.11*	0.06	0.31**
MO			0.61**	-0.34**	-0.17**	-0.42**	-0.10	0.02	0.13*	-0.06	0.04	0.08
SSH				-0.32**	-0.06	-0.78**	-0.04	0.00	-0.07	0.08	0.04	0.18**
MB					0.06	0.24**	0.09	-0.03	0.08	-0.03	-0.14**	-0.11**
AUD						-0.12*	-0.08	-0.01	0.03	0.08	-0.03	0.11*
QUOTED							0.10	0.02	0.07	-0.01	-0.21**	-0.50**
DCAPGDS								-0.21**	-0.34**	-0.33**	-0.25**	-0.01
DDURGDS									-0.20**	-0.19**	-0.15**	0.03
DNONDUR										-0.32**	-0.24**	0.02
DOTHER											-0.23**	0.00
DFIN												-0.04

* Significant at < 0.05 ** Significant at < 0.01 No. of cases varied depending on availability of data on each pair of variables

Table A3.4 Bivariate Spearman correlations of independent variables - targets

The data in this table form the basis for table 4.11

	D1989	D1990	D1991	D1992	BID	DCASH	DPAPER	DMIXED	BHOR	VAL	REV	TA1	TA2
D1988	-0.37**	-0.31**	-0.27**	-0.20**	0.01	0.00	0.03	0.06	0.06	0.07	-0.02	0.00	-0.01
D1989		-0.30**	-0.27**	-0.20 **	0.02	0.02	-0.03	0.01	0.02	0.13**	-0.02	0.04	0.04
D1990			-0.22**	-0.16**	-0.04	0.05	-0.05	-0.04	-0.06	-0.03	0.03	-0.02	-0.01
D1991				-0.15**	0.02	-0.02	-0.02	-0.01	-0.00	-0.13**	0.04	-0.02	-0.03
D1992					-0.02	-0.08*	0.07	-0.04	-0.03	-0.08*	-0.03	-0.01	0.01
BID						0.03	-0.09*	0.02	-0.02	0.28**	0.27**	0.34**	0.34**
DCASH							0.07	0.45**	0.01	0.07	0.01	0.00	0.02
DPAPER								0.52**	0.06	-0.11**	-0.14**	-0.19**	-0.18**
DMIXED									0.06	0.08*	0.03	0.01	-0.00
BHOR										0.05	0.03	0.03	0.03
VAL											0.73**	0.82**	0.81**
REV												0.70**	0.68**
TA1													0.98**

* Significant at < 0.05 ** Significant at < 0.01 No. of cases varied depending on availability of data on each pair of variables

Table A3.4 Bivariate Spearman correlations of independent variables - targets (continued)

	LEV	MO	SSH	MB	AUD	DCAP GDS	DDURG DS	DNON DUR	DOTHER	DFIN	DNAT
D1988	0.03	0.04	0.00	0.10**	-0.06	-0.02	-0.03	0.11**	-0.03	-0.04	-0.01
D1989	-0.04	-0.02	-0.01	0.01	-0.04	-0.05	-0.01	-0.00	-0.01	0.07	-0.09*
D1990	0.04	-0.01	-0.01	-0.00	0.03	-0.04	0.08	-0.05	0.04	-0.00	0.04
D1991	-0.01	0.03	-0.03	-0.10**	0.07	0.08*	-0.01	-0.04	0.02	-0.07	0.01
D1992	-0.04	-0.06	0.06	-0.03	0.01	0.06	-0.03	-0.05	-0.02	0.05	0.08*
BID	0.09	-0.32**	-0.04	0.22**	0.09*	-0.01	-0.04	0.05	-0.01	0.01	0.01
DCASH	-0.00	-0.02	0.10*	0.12**	0.03	0.00	-0.01	0.05	-0.05	0.00	-0.05
DPAPER	-0.08*	0.06	0.03	-0.12**	0.05	0.01	0.01	0.03	-0.01	-0.05	-0.03
DMIXED	0.00	0.00	0.02	0.05	0.01	0.02	-0.01	0.02	-0.02	-0.02	-0.06
BHOR	-0.04	0.02	0.01	0.02	-0.03	0.01	0.04	0.00	-0.03	-0.02	-0.04
VAL	0.16**	-0.40**	0.00	0.48 **	0.13**	0.02	-0.10*	0.03	-0.04	0.09*	-0.01
REV	0.26**	-0.32**	-0.08	0.47**	0.14**	0.12**	-0.03	0.07	0.05	-0.25**	0.00
TA1	0.26**	-0.47**	0.01	0.49**	0.19**	0.04	-0.11**	-0.03	-0.04	0.16**	0.04
TA2	0.11**	-0.48**	0.02	0.49**	0.19**	0.03	-0.12**	-0.02	-0.06	0.18**	0.03
LEV		-0.07	-0.05	0.12**	0.08	0.00	-0.01	-0.05	0.10*	-0.06	-0.02
MO			-0.35**	-0.25**	-0.14**	-0.02	0.14**	0.04	-0.04	-0.12**	-0.02
SSH				0.00	0.00	-0.09*	-0.04	-0.02	0.01	0.16**	-0.06
MB					0.13**	0.02	0.02	0.02	-0.05	-0.02	-0.14**
AUD						-0.04	0.06	-0.05	0.02	0.04	0.08*
DCAPGDS							-0.21**	-0.31**	-0.26**	-0.21**	-0.05
DDURGDS								-0.26**	-0.22**	-0.18**	-0.00
DNONDUR									-0.33**	-0.26**	0.07
DOTHER										-0.22**	0.02
DFIN											-0.05

* Significant at < 0.05 ** Significant at < 0.01 No. of cases varied depending on availability of data on each pair of variables

Table A3.5 Bivariate Spearman correlations of independent variables where content of disclosures is the dependant variable

	BT	BID	CIRC	PER	FHOR	VAL	REV	TA1	TA2	LEV	MO	SSH
BT		0.16**	0.10	-0.05	-0.06	-0.00	-0.01	0.01	-0.02	0.13*	-0.01	0.08
BID			-0.01	-0.02	0.15*	0.34**	0.30**	0.38**	0.38**	0.08	-0.30**	-0.00
CIRC				0.08	-0.08	0.01	-0.01	0.05	0.04	0.10	-0.14*	0.03
PER					0.25**	-0.05	-0.13*	-0.07	-0.05	-0.04	0.01	-0.11
FHOR						0.03	0.01	0.02	0.04	0.00	-0.06	0.10
VAL							0.76**	0.85**	0.85**	0.19**	-0.56**	-0.13
REV								0.82**	0.81**	0.30**	-0.55**	-0.14
TA1									0.98**	0.33**	-0.63**	-0.08
TA2										0.19**	-0.64**	-0.09
LEV											-0.19**	0.06
MO												-0.06

	MB	AUD	QUOTED	DCAPGDS	DDURGDS	DNONDUR	DOTHER	DFIN	NAT
BT	0.19**	0.03	0.39**	0.07	-0.13*	0.11	.	0.03	-0.18**
BID	0.34**	0.05	0.15*	0.07	-0.01	0.06	.	-0.10	-0.13*
CIRC	0.03	-0.07	0.05	-0.03	-0.09	-0.05	.	0.11	0.04
PER	-0.06	-0.04	-0.08	0.05	-0.09	0.05	.	-0.01	0.07
FHOR	-0.01	-0.01	-0.19**	-0.05	-0.02	0.08	.	0.01	0.18**
VAL	0.37**	0.03	-0.01	-0.07	-0.07	0.11	.	0.07	0.03
REV	0.38**	0.08	0.04	0.02	0.11	0.04	.	-0.14*	0.02
TA1	0.43**	0.11	0.01	-0.08	-0.02	0.05	.	0.08	0.08
TA2	0.43**	0.10	0.04	-0.06	-0.03	0.07	.	0.05	0.02
LEV	0.03	0.07	-0.00	-0.14*	0.05	-0.16*	.	0.20**	0.09
MO	-0.37**	0.03	0.06	-0.05	0.07	0.07	.	-0.02	0.03
SSH	-0.00	0.02	-0.03	-0.01	0.05	-0.04	.	0.01	-0.10
MB		0.11	0.22**	0.06	-0.06	0.03	.	-0.08	-0.21**
AUD			-0.05	-0.02	0.11	-0.15*	.	0.02	0.08
QUOTED				0.05	-0.10	0.06	.	-0.04	-0.39**
DCAPGDS					-0.21**	-0.34**	.	-0.75**	-0.01
DDURGDS						-0.25**	.	-0.28**	0.03
DNONDUR							.	0.01	0.04
DOTHER								.	.
DFIN									-0.01

* Significant at ≤ 0.05 ** Significant at < 0.01 '.' means coefficient cannot be computed

No. of cases varied depending on availability of data on each pair of variables. The data from this table form the basis for table 7.3

Table A3.6 Full output of logit regression for bidders - including SSH

The data from this table form the basis for table 6.4

-2 Log likelihood 87.95 Significance 1.00
Goodness of fit 143.88 Significance 0.97
Model chi-square 47.27 (d.f. 6) Significance 0.00
Pseudo R^2 0.35
Number of observations 186 cases (22 F; 164 NF)

Variables in the equation

	Regression coefficients	Std.error of coefficient	Wald	Signif. t	R
Intercept	-3.17	5.86	0.29	0.59	
BHOR	-5.02	1.20	17.62	0.00	-0.34
YEAR			4.60	0.33	0.00
YEAR (1988)	2.57	5.87	0.19	0.66	0.00
YEAR (1989)	1.30	5.88	0.05	0.83	0.00
YEAR (1990)	1.96	5.87	0.11	0.74	0.00
YEAR (1991)	1.14	5.88	0.04	0.85	0.00
BID	1.69	0.59	8.14	0.00	0.21

Variables not in the equation

	Score	Signif. t	R
VAL	0.25	0.62	0.00
LEV	0.09	0.77	0.00
MO	0.11	0.74	0.00
SSH	1.17	0.28	0.00
CON	6.99	0.03	0.15
CON (CASH)	4.76	0.03	0.14
CON (PAPER)	0.01	0.92	0.00
QUOTED	2.28	0.13	0.05
MB	0.36	0.55	0.00
AUD	0.14	0.70	0.00
NAT	0.49	0.48	0.00
IND	2.49	0.65	0.00
IND (CAPGDS)	0.42	0.52	0.00
IND (DURGDS)	0.17	0.68	0.00
IND (NONDUR)	0.59	0.44	0.00
IND (OTHER)	0.66	0.42	0.00

Table A3.7 Full output of logit regression for bidders - excluding SSH

The data from this table form the basis for table 6.5

-2 Log likelihood 160.72 Significance 1.00
Goodness of fit 250.68 Significance 0.98
Model chi-square 57.37 (d.f. 9) Significance 0.00
Pseudo R^2 0.26
Number of observations 308 cases (35 F; 273 NF)

Variables in the equation

	Regression coefficients	Std.error of coefficient	Wald	Signif. t	R
Intercept	-2.51	0.42	36.51	0.00	
BHOR	-3.39	0.76	19.75	0.00	-0.28
VAL	1.00-06	5.22-07	3.70	0.05	0.09
YEAR			10.36	0.03	0.10
YEAR (1988)	0.94	0.36	6.78	0.01	0.15
YEAR (1989)	-0.49	0.50	0.97	0.33	0.00
YEAR (1990)	0.81	0.41	3.95	0.05	0.09
YEAR (1991)	-0.48	0.50	0.91	0.34	0.00
BID	1.21	0.47	6.61	0.01	0.15
CON			9.49	0.01	0.16
CON (CASH)	-1.36	0.52	7.01	0.00	-0.15
CON (PAPER)	1.04	0.34	9.21	0.00	0.18

Variables not in the equation

	Score	Signif. t	R
LEV	0.30	0.58	0.00
MO	0.32	0.57	0.00
QUOTED	2.21	0.14	0.03
MB	1.51	0.22	0.00
AUD	0.00	0.97	0.00
NAT	0.33	0.57	0.00
IND	8.92	0.06	0.06
IND (CAPGDS)	0.48	0.49	0.00
IND (DURGDS)	1.43	0.23	0.00
IND (NONDUR)	2.54	0.11	0.05
IND (OTHER)	0.98	0.32	0.00

Table A3.8 Full output of logit regression for targets - including SSH

The data from this table form the basis for table 6.6

-2 Log likelihood 360.24 Significance 0.75
Goodness of fit 360.42 Significance 0.75
Model chi-square 49.68 (d.f. 2) Significance 0.00
Pseudo R^2 0.12
Number of observations 382 cases (87 F; 295 NF)

Variables in the equation

	Regression coefficients	Std.error of coefficient	Wald	Signif. t	R
Intercept	-1.53	0.20	55.50	0.00	
BHOR	-1.10	0.46	5.74	0.02	-0.10
BID	1.74	0.27	42.69	0.00	0.32

Variables not in the equation

	Score	Signif. t	R
VAL	2.17	0.14	0.02
LEV	0.00	0.97	0.00
MO	0.71	0.40	0.00
SSH	0.71	0.40	0.00
YEAR	0.96	0.92	0.00
YEAR (1988)	0.05	0.83	0.00
YEAR (1989)	0.40	0.53	0.00
YEAR (1990)	0.10	0.75	0.00
YEAR (1991)	0.52	0.47	0.00
CON	1.19	0.55	0.00
CON (CASH)	0.46	0.50	0.00
CON (PAPER)	0.22	0.64	0.00
MB	0.70	0.40	0.00
AUD	0.66	0.42	0.00
NAT	0.21	0.65	0.00
IND	5.66	0.23	0.00
IND (CAPGDS)	4.03	0.04	0.07
IND (DURGDS)	0.42	0.52	0.00
IND (NONDUR)	1.26	0.26	0.00
IND (OTHER)	2.85	0.09	0.05

Table A3.9 Full output of logit regression for targets - excluding SSH

The data from this table form the basis for table 6.7

-2 Log likelihood 456.61 Significance 0.98
Goodness of fit 496.12 Significance 0.79
Model chi-square 105.43 (d.f. 7) Significance 0.00
Pseudo R^2 0.19
Number of observations 530 cases (118 F; 412 NF)

Variables in the equation

	Regression coefficients	Std.error of coefficient	Wald	Signif. t	R
Intercept	-1.66	0.19	78.19	0.00	
BHOR	-1.71	0.42	16.95	0.00	-0.16
VAL	4.83-07	2.26-07	4.55	0.03	0.07
BID	1.89	0.25	57.89	0.00	0.31
IND			10.26	0.04	0.06
IND (CAPGDS)	0.49	0.23	4.62	0.03	0.07
IND (DURGDS)	-0.17	0.30	0.34	0.56	0.00
IND (NONDUR)	0.17	0.21	0.63	0.43	0.00
IND (OTHER)	0.42	0.23	3.35	0.07	0.05

Variables not in the equation

	Score	Signif. t	R
LEV	0.27	0.60	0.00
MO	0.05	0.82	0.00
YEAR	2.64	0.62	0.00
YEAR (1988)	1.22	0.27	0.00
YEAR (1989)	0.00	0.97	0.00
YEAR (1990)	0.13	0.72	0.00
YEAR (1991)	0.66	0.42	0.00
CON	1.01	0.60	0.00
CON (CASH)	0.59	0.44	0.00
CON (PAPER)	0.86	0.35	0.00
MB	0.26	0.61	0.00
AUD	0.60	0.44	0.00
NAT	0.02	0.88	0.00

Table A3.10 Full output of logit regression for agreed bids - including SSH

The data from this table form the basis for table 6.11

-2 Log likelihood 273.47 Significance 1.00
Goodness of fit 383.32 Significance 0.91
Model chi-square 38.16 (d.f. 2) Significance 0.00
Pseudo R^2 0.12
Number of observations 424 cases (51 F; 373 NF)

Variables in the equation

	Regression coefficients	Std.error of coefficient	Wald	Signif. t	R
Intercept	-1.47	0.19	63.15	0.00	
BHOR	-2.93	0.58	25.38	0.00	-0.27
VAL	1.52-06	5.57-07	7.48	0.07	0.13

Variables not in the equation

	Score	Signif. t	R
LEV	0.00	0.98	0.00
MO	0.27	0.60	0.00
SSH	1.17	0.28	0.00
YEAR	4.52	0.34	0.00
YEAR (1988)	3.32	0.07	0.07
YEAR (1989)	0.38	0.54	0.00
YEAR (1990)	0.58	0.44	0.00
YEAR (1991)	0.08	0.78	0.00
BT	1.31	0.25	0.00
CON	0.44	0.80	0.00
CON (CASH)	0.17	0.68	0.00
CON (PAPER)	0.08	0.77	0.00
QUOTED	0.25	0.61	0.00
MB	0.00	0.96	0.00
AUD	0.03	0.86	0.00
NAT	0.06	0.80	0.00
IND	2.03	0.73	0.00
IND (CAPGDS)	1.10	0.29	0.00
IND (DURGDS)	0.04	0.85	0.00
IND (NONDUR)	0.11	0.74	0.00
IND (OTHER)	1.19	0.28	0.00

Table A3.11 Full output of logit regression for agreed bids - excluding SSH

The data from this table form the basis for table 6.12

-2 Log likelihood 394.30 Significance 1.00
Goodness of fit 583.17 Significance 0.87
Model chi-square 52.51 (d.f. 2) Significance 0.00
Pseudo R^2 0.12
Number of observations 626 cases (72 F; 554 NF)

Variables in the equation

	Regression coefficients	Std.error of coefficient	Wald	Signif. t	R
Intercept	-1.43	0.15	91.20	0.00	
BHOR	-3.10	0.48	41.14	0.01	-0.30
VAL	8.60-07	3.06-07	7.85	0.00	0.11

Variables not in the equation

	Score	Signif. t	R
LEV	0.26	0.61	0.00
MO	0.19	0.66	0.00
YEAR	6.08	0.19	0.00
YEAR (1988)	3.91	0.05	0.07
YEAR (1989)	0.27	0.60	0.00
YEAR (1990)	0.82	0.37	0.00
YEAR (1991)	0.31	0.58	0.00
BT	1.56	0.21	0.00
CON	0.52	0.77	0.00
CON (CASH)	0.48	0.49	0.00
CON (PAPER)	0.02	0.89	0.00
QUOTED	0.04	0.84	0.00
MB	0.16	0.69	0.00
AUD	0.00	0.99	0.00
NAT	0.17	0.68	0.00
IND	3.23	0.52	0.00
IND (CAPGDS)	0.46	0.50	0.00
IND (DURGDS)	0.77	0.38	0.00
IND (NONDUR)	0.03	0.86	0.00
IND (OTHER)	3.01	0.08	0.05

Table A3.12 Full output of logit regression for contested bids - including SSH

The data from this table form the basis for table 6.13

-2 Log likelihood 186.41 Significance 0.01
Goodness of fit 144.00 Significance 0.44
Model chi-square 7.74 (d.f. 1) Significance 0.00
Pseudo R^2 0.04
Number of observations 144 cases (58 F; 86 NF)

Variables in the equation

	Regression coefficients	Std.error of coefficient	Wald	Signif. t	R
Intercept	-1.19	0.36	10.94	0.00	
BT	-1.09	0.41	7.05	0.01	0.16

Variables not in the equation

	Score	Signif. t	R
BHOR	0.67	0.41	
VAL	0.35	0.55	0.00
LEV	0.64	0.42	0.00
MO	0.68	0.41	0.00
SSH	0.75	0.39	0.00
YEAR	2.32	0.68	0.00
YEAR (1988)	0.51	0.48	0.00
YEAR (1989)	0.70	0.40	0.00
YEAR (1990)	0.47	0.49	0.00
YEAR (1991)	0.06	0.81	0.00
CON	1.21	0.55	0.00
CON (CASH)	0.63	0.43	0.00
CON (PAPER)	1.14	0.28	0.00
MB	0.39	0.53	0.00
AUD	0.40	0.53	0.00
NAT	0.05	0.82	0.00
IND	0.97	0.91	0.00
IND (CAPGDS)	0.76	0.38	0.00
IND (DURGDS)	0.52	0.47	0.00
IND (NONDUR)	0.28	0.59	0.00
IND (OTHER)	0.16	0.69	0.00

Table A3.13 Full output of logit regression for contested bids - excluding SSH

The data from this table form the basis for table 6.14

-2 Log likelihood 259.22 Significance 0.01
Goodness of fit 211.99 Significance 0.45
Model chi-square 22.74 (d.f. 1) Significance 0.00
Pseudo R^2 0.08
Number of observations 212 cases (81 F; 131 NF)

Variables in the equation

	Regression coefficients	Std.error of coefficient	Wald	Signif. t	R
Intercept	-3.17	5.86	0.29	0.59	
BT	-5.02	1.20	17.62	0.00	-0.34

Variables not in the equation

	Score	Signif. t	R
BHOR	1.95	0.16	0.00
VAL	2.92	0.09	0.06
LEV	0.01	0.94	0.00
MO	0.06	0.81	0.00
YEAR	3.39	0.49	0.00
YEAR (1988)	0.51	0.48	0.00
YEAR (1989)	2.09	0.15	0.02
YEAR (1990)	0.00	0.98	0.00
YEAR (1991)	0.43	0.51	0.00
CON	0.71	0.70	0.00
CON (CASH)	0.20	0.66	0.14
CON (PAPER)	0.14	0.71	0.00
QUOTED	0.11	0.74	0.05
MB	0.33	0.56	0.00
AUD	0.01	0.93	0.00
NAT	0.07	0.80	0.00
IND	5.48	0.24	0.00
IND (CAPGDS)	4.33	0.04	0.09
IND (DURGDS)	3.61	0.06	0.08
IND (NONDUR)	1.26	0.26	0.00
IND (OTHER)	0.88	0.35	0.00

Table A3.14 Negative binomial model results for agreed bids only - dependent variable ITEMS - including SSH

The data from this table form the basis for table 7.12

Size variable REV (all size variables give similar results)
Number of observations 62 forecasts
Log-likelihood -105.46
Pearson chi-square goodness of fit (45 d.f.) 73.16 Significance 0.01
Pseudo R^2 0.92
Likelihood ratio test 0.47 Chi-square (d.f. 1) 0.95 Significance 0.33

	Regression coefficients	Std.error of coefficient	t statistic	P value
Intercept	-0.14	0.98	-0.14	0.89
BT	0.03	0.28	0.10	0.92
CIRC	-1.37	0.44	-3.14	0.00**
PER	0.60	0.68	0.88	0.38
FHOR	-0.54E-02	0.21E-02	-2.61	0.01*
REV	0.12	0.22E-03	0.55	0.58
LEV	-0.76	0.46	-1.63	0.10
MO	-0.36E-02	0.92E-02	-0.40	0.70
SSH	0.69	1.02	0.67	0.50
MB	0.25	0.37	0.68	0.50
AUD	0.40	0.29	1.39	0.16
DCAPGDS	0.07	0.66	0.10	0.92
DDURGDS	-0.51	0.76	-0.67	0.51
DNONDUR	-0.07	0.65	-0.10	0.92
DOTHER	0.68	0.66	1.03	0.30
NAT	1.12	0.69	1.61	0.11

Only one case was unquoted so QUOTED was not analysed by the program

Table A3.15 Negative binomial model results for agreed bids only - dependent variable ITEMS - excluding SSH

The data from this table form the basis for table 7.12

Size variable REV (all size variables give similar results)
Number of observations 94 forecasts
Log-likelihood -161.81
Pearson chi-square goodness of fit (78 d.f.) 134.78 Significance 0.00
Pseudo R^2 0.89
Likelihood ratio test 7.57 Chi-square (d.f. 1) 15.15 Significance 0.00

	Regression coefficients	Std.error of coefficient	t statistic	P value
Intercept	0.72	0.54	1.35	0.18
BT	-0.03	0.24	-0.11	0.91
CIRC	-1.17	0.31	-3.83	0.00**
PER	0.31	0.38	0.81	0.42
FHOR	-0.37E-02	0.14E-02	-2.61	0.01*
REV	0.41E-03	0.11E-03	3.61	0.00**
LEV	-0.50	0.48	-1.03	0.30
MO	-0.44E-02	0.50E-02	-0.89	0.37
MB	0.32	0.30	1.08	0.28
AUD	0.07	0.26	0.26	0.79
DCAPGDS	-0.27	0.49	-0.55	0.58
DDURGDS	-0.74	0.48	-1.54	0.12
DNONDUR	-0.26	0.46	-0.57	0.57
DOTHER	0.14	0.43	0.32	0.75
NAT	0.20	0.52	0.39	0.70

Only one case was unquoted so QUOTED was not analysed by the program

Table A3.16 Negative binomial model results for agreed bids only - dependent variable ASS - including SSH

The data from this table form the basis for table 7.13

Size variable REV (all size variables give similar results)
Number of observations 62 forecasts
Log-likelihood -113.88
Pearson chi-square goodness of fit (45 d.f.) 91.17 Significance 0.00
Pseudo R^2 0.90
Likelihood ratio test 4.40 Chi-square (d.f. 1) 8.80 Significance 0.00

	Regression coefficients	Std.error of coefficient	t statistic	P value
Intercept	0.38	0.85	0.45	0.65
BT	0.27	0.41	0.66	0.51
CIRC	-0.10	0.31	-0.33	0.74
PER	0.56	0.53	1.06	0.29
FHOR	0.01	0.18E-02	5.93	0.00**
REV	-0.13E-02	1.00E-03	-1.35	0.18
LEV	-0.35	0.60	-0.58	0.56
MO	0.91E-03	0.01	0.09	0.93
SSH	1.18	0.76	1.55	0.12
MB	0.28	0.34	0.83	0.41
AUD	0.22	0.29	0.75	0.45
DCAPGDS	-0.43	0.55	-0.79	0.43
DDURGDS	-0.51	0.60	-0.86	0.39
DNONDUR	-1.11	0.54	-2.05	0.04*
DOTHER	-1.01	0.52	-1.93	0.05*
NAT	-0.61	1.29	-0.47	0.64

Only one case was unquoted so QUOTED was not analysed by the program

Table A3.17 Negative binomial model results for agreed bids only - dependent variable ASS- excluding SSH

The data from this table form the basis for table 7.13

Size variable REV (all size variables give similar results)
Number of observations 94 forecasts
Log-likelihood -194.71
Pearson chi-square goodness of fit (78 d.f.) 178.07 Significance 0.00
Pseudo R^2 0.91
Likelihood ratio test 21.86 Chi-square (d.f. 1) 43.71 Significance 0.00

	Regression coefficients	Std.error of coefficient	t statistic	P value
Intercept	0.39	0.62	0.62	0.53
BT	0.23	0.35	0.66	0.51
CIRC	-0.12	0.25	-0.47	0.64
PER	0.33	0.47	0.69	0.49
FHOR	0.90E-02	0.15E-02	5.88	0.00**
REV	-0.10E-02	0.44E-03	-2.27	0.02*
LEV	-0.18	0.35	0.53	0.60
MO	-0.22E-02	0.62E-02	0.36	0.72
MB	0.18	0.29	0.64	0.52
AUD	0.23	0.23	1.00	0.32
DCAPGDS	0.10	0.37	0.28	0.78
DDURGDS	-0.21	0.44	-0.48	0.63
DNONDUR	-0.27	0.35	-0.79	0.43
DOTHER	-0.40	0.34	-1.19	0.23
NAT	-0.67	0.90	-0.74	0.46

Only one case was unquoted so QUOTED was not analysed by the program

Table A3.18 Negative binomial model results for contested bids only - dependent variable ITEMS - including SSH

The data from this table form the basis for table 7.12

Size variable REV (all size variables give similar results)
Number of observations 79 forecasts
Log-likelihood -169.94
Pearson chi-square goodness of fit (62 d.f.) 101.12 Significance 0.00
Pseudo R^2 0.73
Likelihood ratio test 2.96 Chi-square (d.f. 1) 5.92 Significance 0.02

	Regression coefficients	Std.error of coefficient	t statistic	P value
Intercept	0.94E-02	0.81	0.01	0.99
BT	0.76	0.51	1.49	0.13
CIRC	-1.14	0.27	-4.44	0.00**
PER	1.46	0.47	3.14	0.00**
FHOR	-0.10E-02	0.31E-03	-3.28	0.00**
REV	-0.79E-04	0.28E-03	-0.29	0.77
LEV	0.06	0.68	0.09	0.93
MO	0.72E-02	0.97E-02	0.75	0.46
SSH	-0.92	0.47	-1.96	0.05*
MB	-0.14	0.24	-0.59	0.55
AUD	-0.17	0.39	-0.43	0.67
DCAPGDS	0.04	0.27	0.14	0.89
DDURGDS	0.15	0.39	0.38	0.70
DNONDUR	0.04	0.29	0.14	0.89
DOTHER	-0.06	0.32	-0.19	0.85
NAT	-0.35	1.34	-0.26	0.80

Only one case was unquoted so QUOTED was not analysed by the program

Table A3.19 Negative binomial model results for contested bids only - dependent variable ITEMS - excluding SSH

The data from this table form the basis for table 7.12

Size variable REV (all size variables give similar results)
Number of observations 111 forecasts
Log-likelihood -266.81
Pearson chi-square goodness of fit (95 d.f.) 247.24 Significance 0.00
Pseudo R^2 0.67
Likelihood ratio test 42.35 Chi-square (d.f. 1) 84.69 Significance 0.00

	Regression coefficients	Std.error of coefficient	t statistic	P value
Intercept	0.33	0.68	0.48	0.63
BT	0.51	0.39	1.32	0.19
CIRC	-0.92	0.23	-4.03	0.00**
PER	0.56	0.23	2.41	0.02*
FHOR	-0.50E-03	0.63E-03	-0.80	0.42
REV	0.72E-05	0.52E-04	0.14	0.89
LEV	0.07	0.61	0.11	0.91
MO	-0.43E-02	0.01	-0.38	0.70
MB	0.03	0.29	0.11	0.91
AUD	0.18	0.23	0.77	0.44
DCAPGDS	0.24	0.41	-0.57	0.57
DDURGDS	0.06	0.48	0.13	0.90
DNONDUR	0.35	0.42	0.85	0.40
DOTHER	0.24	0.44	0.55	0.59
NAT	-0.55	1.33	-0.42	0.68

Only one case was unquoted so QUOTED was not analysed by the program

Table A3.20 Negative binomial model results for contested bids only - dependent variable ASS - including SSH

The data from this table form the basis for table 7.13

Size variable REV (all size variables give similar results)
Number of observations 79 forecasts
Log-likelihood -193.18
Pearson chi-square goodness of fit (62 d.f.) 121.82 Significance 0.00
Pseudo R^2 0.62
Likelihood ratio test 4.52 Chi-square (d.f. 1) 9.05 Significance 0.00

	Regression coefficients	Std.error of coefficient	t statistic	P value
Intercept	-0.14	0.51	-0.28	0.78
BT	0.87	0.28	3.13	0.00**
CIRC	-1.36	0.20	-6.78	0.00**
PER	0.53	0.23	2.27	0.02*
FHOR	0.36E-03	0.28E-03	1.29	0.20
REV	-0.62E-04	0.24E-03	-0.26	0.80
LEV	-0.23E02	0.58	-0.39E-02	1.00
MO	0.88E-02	0.69E-02	1.27	0.20
SSH	0.33	0.44	0.76	0.44
MB	-0.16	0.29	-0.55	0.58
AUD	0.02	0.19	0.09	0.93
DCAPGDS	0.75	0.24	3.17	0.00**
DDURGDS	0.74	0.35	2.10	0.04*
DNONDUR	0.93	0.28	3.34	0.00**
DOTHER	0.80	0.26	3.12	0.00**
NAT	0.37	0.45	0.83	0.40

Only one case was unquoted so QUOTED was not analysed by the program

Table A3.21 Negative binomial model results for contested bids only - dependent variable ASS- excluding SSH

The data from this table form the basis for table 7.13

Size variable REV (all size variables give similar results)
Number of observations 111 forecasts
Log-likelihood -287.64
Pearson chi-square goodness of fit (95 d.f.) 237.28 Significance 0.00
Pseudo R^2 0.64
Likelihood ratio test 28.52 Chi-square (d.f. 1) 57.04 Significance 0.00

	Regression coefficients	Std.error of coefficient	t statistic	P value
Intercept	-0.51	0.50	-1.01	0.31
BT	0.72	0.26	2.77	0.01*
CIRC	-0.94	0.20	-4.63	0.00**
PER	0.59	0.20	2.90	0.00**
FHOR	0.83E-03	0.24E-03	3.38	0.00**
REV	-0.44E-05	0.25E-04	-0.18	0.86
LEV	-0.13	0.55	-0.24	0.81
MO	0.01	0.66E-02	1.80	0.07
MB	-0.05	0.33	-0.14	0.89
AUD	0.28	0.16	1.77	0.08
DCAPGDS	0.83	0.24	3.42	0.00**
DDURGDS	0.98	0.34	2.86	0.00**
DNONDUR	1.03	0.25	4.15	0.00**
DOTHER	1.15	0.25	4.58	0.00**
NAT	0.23	1.27	0.18	0.86

Only one case was unquoted so QUOTED was not analysed by the program

Appendix 4: EXAMPLES FROM FORECASTS

A comprehensive survey of the content of forecasts, and of sundry other forecast-related disclosures in the takeover documents, was carried out. This appendix includes 72 examples from the takeover documents as background data on disclosures in forecasts, and on forecast-related disclosures in takeover documents generally. These examples are discussed under 15 headings and are summarised in table A4.1.

Table A4.1: Summary of examples

Issue illustrated by the example	Takeover bid (Bidder-Target, Year)
1. Absence of a forecast	
1 Statement of reasons for absence	Blacks Leisure - A. Goldberg, 1989
2 Statement of reasons for absence	Rank - Mecca Leisure, 1990
3 Statement of reasons for absence	Amshold - Amstrad, 1992
4 Attack on target for absence	Ladbroke - Thompson T-Line, 1989
5 Attack on target for absence	Iceland Frozen Foods - Bejam, 1988
6 Attack on target for absence	IMI - Birmingham Mint, 1991
7 Attack on target for absence	Grampian - Macarthy, 1991
2. Circumstances of disclosing forecasts	
8 Involuntary forecast	Barlo - IRG, 1992
9 Involuntary forecast	Corton Beach - Lyon & Lyon, 1989
10 Statement not an involuntary forecast	LASMO - Ultramar, 1991
11 Repeat forecast	Pernod Ricard - Irish Distillers, 1988
12 Repeat 'estimate'	Compass Group - Sketchley, 1990
13 Change in forecast when repeated	Godfrey Davis - Sketchley, 1990
3. Methods of presenting forecasts	
14 Narrative format	Redland - Steetley, 1992
15 Statement format	Elsevier - Reed International, 1992
16 Attack on wording of forecast	Sears - Freemans, 1988
17 Imprecise terminology	Cambridge - Xtra-vision, 1990
18 Attack on imprecise wording	Epicure - Habit Precision Engineering, 1989
4. Items disclosed in forecasts	
19 Comprehensive disclosure	Nestlé - Rowntree, 1988
20 Comprehensive disclosure	Kingfisher - Dixons Group, 1990
21 Comprehensive disclosure & no assumptions	Kanta Enterprises - F. Copson, 1991
22 First forecast	Boots - Ward White, 1989
23 Second 'estimate'	Boots - Ward White, 1989
24 Combined forecast	Elsevier - Reed International, 1992

Table A4.1: Summary of examples (continued)

Issue illustrated by the example	Takeover bid (Bidder-Target, Year)
5. Assumptions disclosed	
25 Bases of calculation and assumptions	Rothmans Intnl.- P.J.Carroll, 1990
26 Assumptions disclosed	Cornwall Trust - Highland Participants, 1989
27 Attack on assumptions	Sears - Freemans, 1988
6. Accounting policies disclosed	
28 Change in accounting policy	GC&C Brands - Irish Distillers, 1988
29 Attack on change in accounting policy	GC&C Brands - Irish Distillers, 1988
30 Change in accounting policy	DMSWL - Magnet Group, 1989
31 Change in accounting policy	Arlen - Highland Electronics, 1990
32 Adjustment of accounting policies	Elsevier - Reed International, 1992
33 New accounting policy	Cable and Wireless - Telephone Rentals, 1988
7. Forecast profits not reported on	
34 Forecast profit not reported on	Coates Viyella - Tootal, 1991
35 Forecast revenue not reported on	Cable and Wireless - Telephone Rentals, 1988
36 Forecast revenue not reported on	Saint-Gobain - TSL Group, 1988
37 Forecast profit not reported on	Pembridge Associates - DRG, 1989
38 Projection 'not a forecast'	Norton Opax - De La Rue, 1989
39 Projection 'not a forecast'	LASMO - Ultramar, 1991
40 Profit warranty	Dewey Warren - Argyle Trust, 1989
8. Other forecasts	
41 Forecast item not reported on	Sears - Freemans, 1988
42 Forecast item not reported on	ANI - Aurora, 1988
43 Forecast item not reported on & attack thereon	First Technology - Ricardo, 1989
44 Forecast item not reported on	Minorco - Consol. Gold Fields, 1988
45 Forecast item not reported on	Minorco - Consol. Gold Fields, 1989
9. Use of third party forecasts	
46 Use of third party forecasts	Anglo United - Coalite, 1989
47 Use of third party forecasts	BTR - Hawker Siddeley, 1991
48 Use of third party forecasts	Mecca - Pleasurama, 1988
49 Use of third party forecasts	Mecca - Pleasurama, 1988
50 Use of third party forecasts	Wassall - Metal Closures, 1990
51 Use of third party forecasts	Coates Viyella - Tootal, 1991
52 Use of third party forecast information	First Technology - Ricardo, 1989
53 Use of third party forecasts	Cable and Wireless - Telephone Rentals, 1988
54 Use of third party forecasts	Raine Industries - Ruberoid, 1988
55 Use of third party forecasts	Williams Holdings - Racal Electronics, 1991

Table 4.1: Summary of examples (continued)

Issue illustrated by the example	Takeover bid (Bidder-Target, Year)
10. Attacks on forecasts	
56 Attack on forecast	Mecca - Pleasurama, 1988
57 Attack on forecast	Epicure - Habit Precision Engineering, 1989
58 Attack on forecast	American Brands - Invergordon Distill., 1991
11. Misleading information in forecasts	
59 Attack for misleading information	General Motors - SD-Scicon, 1991
60 Attack for misrepresentation of results	Iceland Frozen Foods - Bejam, 1988
12. Dividend forecasts	
61 Dividend forecast	HSBC - Midland Bank, 1992
62 Dividend forecast	Raine Industries - Walter Lawrence, 1992
63 Dividend forecast	GEC Siemens - Plessey, 1989
64 Reversal of dividend forecast	Robert Frazer - Dewey Warren, 1989
65 Dividend forecast	Adstream - Camford, 1990
66 Attack on dividend forecast	Industrivarden - Redfearn, 1988
13. Current trading and prospects	
67 Current trading and prospects	Bowthorpe - Penny & Giles, 1992
68 Current trading and prospects	Lloyds Chemists - Macarthy, 1992
14. Disclosure of information privately	
69 Private disclosure	Coates Viyella - Tootal, 1991
70 Private disclosure	ANI - Aurora, 1988
71 Private disclosure	GEC Siemens - Plessey, 1989
72 Private disclosure	Hanson - Beazer, 1991

1. Absence of a forecast

A small number of companies referred to the absence of a forecast. The main reasons given for not disclosing a forecast were uncertainty due to volatile market conditions, it being too early in the financial year, and other uncertainties.

Example 1: Statement of reasons for absence of a forecast

Blacks Leisure - A. Goldberg takeover bid 1989
Extract from press release A. Goldberg & Sons PLC (Target)

Given that future results will be highly sensitive to changes in sales volume and margins, the Board has been advised by its financial advisers and auditors that it would not be practicable to provide a forecast of likely outcome for the financial year to March 1990.

Example 2: Statement of reasons for absence of a forecast

Rank Organisation - Mecca Leisure Group takeover 1990
Extract from letter to shareholders from Mecca (Target)

Whilst it is too early to forecast the results for the current financial year, operating profits are broadly in line with your Board's expectations.

Example 3: Statement of reasons for absence of a forecast

Amshold - Amstrad takeover bid 1992
Extract from the proposal for acquisition document of Amshold (Bidder)

(e) Forecasting
The Directors have discussed their internal budgets, projections and estimates for the period to 31 December 1993 with Kleinwort Benson and Touche Ross & Co. As a result of the uncertainty inherent in the projections, and the level of contingencies which would have to be included, the Directors are unable to present a meaningful forecast of profit or loss in the context of the Proposal.

There can be considerable pressure on companies to disclose a forecast, particularly when the bid is contested. This is especially so if the company has referred to future prospects without making a formal forecast or is near its year end.

Example 4: Attack on target for absence of a forecast

Ladbroke - Thompson T-Line takeover 1989
Extract from letter to shareholders from Ladbroke Group PLC (Bidder)

Again, with some eight and a half months' trading results available to them, there can be no excuse for the board of any well managed company failing in the circumstances to inform shareholders as to its current trading performance; the Thompson board, however, has failed to give you this information.
In its response to the Ladbroke Offers, the Thompson board resorted to providing so-called proforma annualised operating profits, prepared on differing bases. These are totally confusing and misleading as a representation of the actual results for the year to 30th April 1988 and are no substitute for a 1989 profit forecast.
Your board must provide you with a profit forecast for the year to 30th April 1989 by division so that you are able to make an informed judgement of the merits of the Ladbroke bid.

Iceland Frozen Foods made a forecast of the target's, Bejam's, results. This did not have to be formally reported on as it was not a forecast of its own business.

Example 5: Attack on target for absence of a forecast
Iceland Frozen Foods - Bejam takeover 1988
Extract from letter to Bejam (target) shareholders from Iceland Frozen Foods Holdings plc (Bidder)

We have already highlighted Bejam's poor trading performance, with Bejam's Chairman stating only last month that the disappointing 1988 results had continued into the current year. We therefore do not believe that your Board can forecast current year pre-tax profits of more than £27.1 million, a small increase on last year's disappointing results.

Many companies provided dividend forecasts (which are generally not reported on by accountants) in place of formal profit forecasts. Only one company in the sample had its dividend forecast formally reported on. IMI used the absence of a forecast to attack Birmingham Mint's dividend forecast.

Example 6: Attack on target for absence of a forecast

IMI - Birmingham Mint takeover 1991
Extract from letter to Birmingham Mint (Target) shareholders from IMI (Bidder)

- Despite claims of "*excellent prospects for the 1990's*" your board has failed to publish a profit forecast to justify this claim.
- The forecast full year dividend of 6.5p is irresponsible. It will not be adequately covered by earnings and will further weaken the cash position.
  There is no evidence to suggest that future dividends can be sustained at this level.

Grampian attacked Macarthy for not providing a forecast. Shareholders in Macarthy were not convinced by this attack as Grampian's bid was not successful.

Example 7: Attack on target for absence of a forecast

Grampian - Macarthy takeover bid 1991
Extract from letter to shareholders from Grampian (Bidder)

Macarthy has not given any clear information on its current trading and still has not published the interim results for the six months ended 31st March 1991. As shareholders, you must be wondering why your Board is unable or unwilling to provide any indication of the results for the current financial year and whether Macarthy's earnings per share in 1991 will reach even last year's level.

2. Circumstances of disclosing forecasts

In the research, forecasts have been divided into three categories depending on the circumstances leading to making the forecast. Most forecasts were made

voluntarily. There were 27 which were made involuntarily under the rules of the Takeover Code. Barlo made a forecast under these circumstances.

Example 8: Involuntary forecast

Barlo - IRG takeover 1992
Extract from offers document in respect of profit forecast of Barlo (Bidder)
A statement on current trading issued on 10th February, 1992 by the Group included the following statement:

> "On the basis of current performance trends, the Group is budgeting, in the absence of unforeseen circumstances, for further growth in revenues and profitability in 1992/1993 financial year".

As the above statement, which the Directors confirm is still valid, constitutes a profit forecast under the Code, please refer to the reports set out on page 16.

Corton Beach disclosed a forecast involuntarily. Typically, these forecasts disclose little detail about profitability but include extensive assumptions. This forecast disclosed no items and 12 assumptions.

Example 9: Involuntary forecast

Corton Beach - Lyon & Lyon takeover 1989
Extract from letter to Corton Beach (Bidder) shareholders dated 7/8/1989
Incorporated within this letter are formal letters from Touche Ross & Co. (auditors to the Company) and Brown Shipley (our financial advisers) relating to my indication at the Annual General Meeting that, in line with the Company's previous record of growth in earnings per share, the earnings during the current financial year would show a further increase.

APPENDIX
Bases and Assumptions
The forecast is presented under the historical cost convention, as modified by the revaluation of certain tangible fixed assets and has been prepared in accordance with the Group's normal accounting policies. The forecast is based on unaudited management accounts for the five months ended 30th June, 1989 and management estimates for the subsequent period and has been prepared under the following assumptions:

(a) that there are no unforeseen circumstances;
(b) that the acquisitions of Lyon & Lyon, and two other smaller acquisitions currently being negotiated for an aggregate initial cash consideration of approximately £1.2 million, will be completed as proposed;
(c) there will be no serious industrial disputes or other disruptions of business directly or indirectly affecting the Group, its customers or suppliers;
(d) there will be no significant changes in present market or economic conditions, rates of inflation, or interest or taxation or currency exchange rates;
(e) there will be no significant change in EEC or UK legislation or other government regulations or policies which will affect the Group; and
(f) no major customer or supplier will cease to trade.

LASMO included a note in its listing particulars that a statement made prior to the bid should not be construed as a forecast.

Example 10: Statement not an involuntary forecast

LASMO - Ultramar takeover 1991
Extract from listing particulars of LASMO (Bidder)

In the Wall Street Journal of 24th September, 1991, an article appeared in which the Finance Director of LASMO was quoted in terms which might be construed as a forecast as to the likely level of profits for LASMO for the year ending 31st December, 1991. The Finance Director had no intention of making any such forecast and no such forecast should be inferred from that article. The Board's views on current trading are set out above.

In the case of companies subject to more than one bid, a forecast made in an earlier bid may be repeated in a subsequent bid. There were 13 such forecasts in the sample.

Example 11: Repeat forecast

Pernod Ricard - Irish Distillers takeover 1988
Extract from Pernod Ricard (bidder) offer document

8. Forecasts of profit before tax and earnings per share
In the document from the Chairman of Irish Distillers to Irish Distillers shareholders dated 7th July 1988, the Directors of Irish Distillers forecast that, in the absence of unforeseen circumstances, profit before taxation and earnings per share for the year ending 30th September 1988 would be in excess of IR£18 million and IR23.4p respectively.
The Directors of Irish Distillers confirm that the forecasts remain valid for the purpose of the Offer and that Stokes Kennedy Crowley (Chartered Accountants and auditors to the Irish Distillers Group), County NatWest Limited and The Investment Bank of Ireland Limited, who reported on the forecasts, have each indicated that they have no objection to their reports continuing to apply.

Sketchley disclosed a forecast in defending a bid from Geoffrey Davis. The forecast was repeated in defending a subsequent bid from Compass Group. Note that once the forecast year end has passed the forecast is referred to as an estimate. The estimate below is comprehensive: eight items and five assumptions were disclosed.

Example 12: Repeat 'estimate'

Compass Group - Sketchley takeover bid 1990
Extract from defence document dated 31/3/1990

In the defence document dated 1st March, 1990 your Board made a profit forecast for the current financial year. The year end has now passed and the Board can confirm that it estimates the same level of profits as previously forecast. Details relating to the estimates are set out in Appendix I.

Appendix I
Profit estimates of the sketchley group

1. Profit estimates
The Board of Sketchley estimates that in the year ended 30th March, 1990, the Sketchley Group's consolidated profit before taxation was not less than £6.0 million, after an exceptional credit of £2.2 million. After taking into account the estimated taxation charge of £1.2 million, the consolidated profit after taxation for that financial year is estimated to have been not less than £4.8 million. An extraordinary charge of £2.3 million after tax relief of £1.0 million is also estimated for that financial year leaving £2.5 million available to shareholders. Earnings per share are estimated to have been not less than 13.2 pence.

These estimates compare with the results for the previous financial year ended 31st March, 1989 of consolidated profit before taxation of £17.3 million, consolidated profit after taxation of £12.9 million, an extraordinary charge of £0.2 million after tax relief of £1.7 million and earnings per share of 35.7 pence.

2. Bases and assumptions of estimates
The estimates of profit before taxation, exceptional items, taxation, profit after taxation, extraordinary items, profit after extraordinary items and of earnings per share in respect of the year ended 30th March, 1990 as set out above and in the Chairman's letter have been prepared under the historical cost convention on a basis consistent with the accounting policies normally adopted by Sketchley. They have been based on unaudited management accounts for the 47 weeks ended 23rd February, 1990 and the Directors' estimates for the 5 weeks ended 30th March, 1990.

The costs of the defence of the offer for Sketchley by Godfrey Davis (Holdings) Plc are estimated to be £1.2 million and this is not reflected in the above profit estimates. No account has been taken of any compensation payable to Mr M Glenn, the former Chairman of Sketchley, the amount of which has not yet been determined.

A comparison of the later estimate with the earlier forecast shows that the assumptions changed substantially between the two. The last paragraph in example 12 did not appear in the earlier forecast (example 13). The rather standard assumptions of the first forecast (example 13) were not repeated. The first forecast disclosed nine assumptions compared to five in the repeat forecast. One of the interviewees referred to the need to be wary of costs excluded from a forecast. The later forecast (example 12) seems to be such a case. Steetley's

forecast (example 14) illustrates how high defence costs can be '*...approximately £8.0 million in respect of defence costs associated with the Redland bid*'.

Example 13: Change in forecast when repeated

Godfrey Davis - Sketchley takeover bid 1990
Extract from defence document dated 1/3/1990

2. Bases and assumptions of forecasts (extract)
No account has been taken of the costs of the defence of the Offer.

The principal assumptions underlying the forecasts are as follows:
(a) the seasonal pattern of sales in previous years will be repeated and will not be distorted by prolonged weather conditions;
(b) there will be no widespread industrial disputes or abnormal operating problems at the works of Sketchley's suppliers or customers;
(c) there will be no adverse effects from changes in taxation or other legislation; and
(d) there will be no significant changes in interest rates.

3. Methods of presenting forecasts

The method of forecast presentation also varied, from brief narrative statements to quite detailed financial statements. Steetley's forecast is in narrative format.

Example 14: Narrative format

Redland - Steetley takeover 1992
Extract from Steetley (target) defence document

1. 1991 profit estimate
The Directors of Steetley estimate that, on the basis set out in paragraph 2 below, the profit before taxation of Steetley and its subsidiary and associated undertakings (the "Group") for the year ended 31st December, 1991 was £32.5 million and earnings per share were 12.9p. Extraordinary charges of approximately £15.1 million are estimated. These comprise approximately £8.0 million in respect of defence costs associated with the Redland bid and approximately £7.1 million (net of tax) in respect of withdrawal from the bulk magnesia refractory segment and closure of related process lines.

Reed International presented its forecast in statement format. The forecast is quite detailed with nine items disclosed.

Example 15: Statement format

Elsevier - Reed International takeover 1992
Extract from proposed merger document in respect of forecast profits of Reed International (Target)
D. Profit Forecast
The Directors of Reed forecast that, in the absence of unforeseen circumstances and on the bases and assumptions set out below, the consolidated profit before tax and earnings per share of Reed for the 12 months ending 31 December 1992 will be not less than £239 million and 30.1p respectively. An illustrative summarised profit and loss account based on these forecasts together with comparative unaudited restated figures for the 12 months ended 31 December 1991, based on management accounting information, is set out below:

	Restated 12 months ended 31 December 1991 £ million	Forecast 12 months ending 31 December 1992 £ million	% change
Turnover	1,578	1,665	6%
Operating profit	226	281	24%
Net interest expense	(36)	(42)	17%
Profit before tax	190	239	26%
Tax	(55)	(70)	27%
Profit after tax	135	169	25%
Minority interests and preference dividends	-	(1)	-
Profit attributable to ordinary shareholders before extraordinary items	135	168	24%
Earnings per ordinary share	24.3p	30.1p	24%

A major factor explaining the forecast of a 26 per cent. increase in profit before tax for the 12 months to 31 December 1992 is the stronger first quarter performance, where comparison is made against a prior year which was impacted by the Gulf War and higher restructuring costs. The SSAP 24 net pension credit reflected in the 1992 forecast is £27.6 million (1991: £23.9 million).

Forecasts can be point, range or non-quantified. Various wordings are used for range forecasts. Sears attacks Freemans for its choice of wording.

Example 16: Attack on wording of forecast
Sears - Freemans takeover 1988
Extract from letter to shareholders from Sears (Bidder) dated 14/4/1988

FREEMANS DISMAL PROFIT FORECAST...
1987/88 has been a year of real decline for Freemans (extract)
With only three weeks of the financial year to run, we expected to see a firm forecast with a minimum profit figure (e.g. "not less than..."). Even at this late stage your Board has been able to do no more than forecast that pre-tax profits will be "of the order of £33.2 million" - i.e. **profits could be even lower.**
A figure of £33.2 million is the absolute minimum required to avoid a fall in earnings per share. If the out-turn were lower, **you would face a fall in earnings per share this year.**

Previous researchers have had problems in interpreting the forecast amounts (Dev, 1973; Ferris, 1975; Morris and Breakwell, 1975; Platt, 1979; Hartnett, 1990). They found that in some cases it was not clear which figure of profit was being forecast (normal trading profit, net profit before tax, before or after minority interest, before or after extraordinary items). Another difficulty is that the published forecast may differ from the internal forecast (by, for example, the application of a contingency factor - this was referred to by a number of interviewees (also, see reference to contingencies in example 3)). In addition, management may subsequently make operating decisions, or may make changes in their accounting methods, to minimise any deviation from the published forecast.

Dev (1973) had problems interpreting profit forecasts and reconciling subsequent results reported in annual accounts. Dev examined 212 prospectus profit forecasts and compared these to the annual accounts of each company for the two years following the forecast. Companies whose profit forecasts and accounts were not comparable (due to takeover) were eliminated from the data. Dev found the wording used in forecasts to be difficult to interpret. Phrases used such as '*profits of the group*' and '*normal trading profit*' were not clear. Other ambiguities were found, such as whether depreciation was calculated on current or historic values, and how exceptional and non-recurring items were treated in arriving at forecast profit. Similarly, Hartnett (1990) was unclear as to the nature of the profit figure forecast - whether it was an operating profit or was net of extraordinary and abnormal items.

This problem is less likely in this research as the City Code was amended in 1984/85 to require disclosure of forecasts of taxation, extraordinary items and minority interests, where these are expected to be significant. Xtra-vision forecast a '*loss*'. Cambridge's forecast refers to '*profits*' without indicating whether these are operating profits, before or after tax, etc.

Example 17: Imprecise terminology
Cambridge - Xtra-vision takeover 1990
Extract from recommended offers document
Xtra-vision's profit forecast for the year ending 31 January 1991
1. Profit forecast
The Board of Xtra-vision is currently forecasting a loss for the year ending 31 January 1991.
2. Bases of calculation
The forecast has been made by reference to:
(a) interim results for the six months to 31 July 1990;
(b) management accounts for the period to 30 September 1990; and
(c) forecasts for the remaining four months of the financial year.
The accounting policies underlying the forecast are consistent with those normally adopted by Xtra-vision, as set out in the audited accounts for the year ended 31 January 1990.
3. Assumptions
The principal assumptions upon which the forecast has been based are as follows:
(a) the disposal of the company's businesses in Britain, Northern Ireland and certain of the US operations being in line with the Board of Xtra-vision's estimate of costs; and
(b) the continued support of the company's bankers.

Cambridge's profit forecast for the year ending 28 February 1991
1. Profit forecast
For the year ending 28 February 1991, the Directors of Cambridge forecast that, in the absence of unforeseen circumstances, the level of profits for the second half of the year, as arrived at below, will be higher than that reported for the first half.
2. Bases of calculation
The forecast has been made by reference to:
(a) the unaudited interim results for the six months ended 31 August 1990; and
(b) forecasts for the remaining six months of the financial year.
The accounting policies adopted in preparing the forecasts are consistent with those normally adopted by Cambridge.
The profit forecast does not include the results of Xtra-vision plc.
3. Assumptions
The principal assumptions upon which the forecast has been based are as follows:
(a) there will be no change in tax or other legislation which would adversely affect the Group's business; and
(b) there will be no major change in interest rates.

Epicure attacks Habit Precision for forecasting operating profit, '*a meaningless figure for shareholders*'.

Example 18: Attack on imprecise wording
Epicure - Habit Precision Engineering takeover 1989
Letter to shareholders from Epicure (bidder) dated 26/5/1989
Profit forecast (extract)
Most unusually, your board has chosen to highlight operating profit in its forecast - a meaningless figure for shareholders. The relevant figures for shareholders are the forecast pre-tax profit of £1.25 million, which will be even less than the pre-tax profit of £1.5 million earned two years previously, and the forecast earnings per share of 5.9p which will be nearly 22 per cent. lower than two years previously. Forecast earnings per share could be even lower if Doric is not sold by 30th September, 1989.

4. Items disclosed in forecasts

Rowntree's forecast is one of the most detailed in the study, with 20 items and eight assumptions disclosed therein. Few profit forecasts disclose as much detail in the forecast profit and loss account, let alone provide detailed notes to the forecast. The breakdown of profit between continuing businesses and discontinued businesses is now required by FRS 3 but in 1988 was rarely done. The segmental analysis of both turnover and trading profit is an example of good disclosure.

Example 19: Comprehensive disclosure

Nestlé - Rowntree takeover 1988
Extract from Rowntree (target) defence document dated 26/5/1988

Profit forecast
The detail supporting the forecast set out on page 1 is as follows:-

		Forecast	*Actual*
		1988	*1987*
	Notes	*£'m*	*£'m*
Turnover of continuing businesses	(i)	1,295.2	1,235.8
Cost of sales		(674.2)	(662.2)
Gross margin		621.0	573.6
Advertising and promotion		(138.9)	(128.6)
Fixed overheads		(344.2)	(329.4)
Trading profit of continuing businesses	(i)	137.9	115.6
Trading profit of snack food businesses	(ii)	5.6	14.5
		143.5	130.1
Interest		(8.5)	(18.0)
Profit on ordinary activities before taxation		135.0	112.1
Taxation	(iii)	(30.8)	(24.2)
Profit on ordinary activities after taxation		104.2	87.9
Extraordinary items	(iv)	17.5	—
Retained profit		121.7	87.9
Earnings per share	(v)	47.0p	40.8p
Dividends per share		18.5p	15.5p

The accounts for 1987 set out above are abridged. Full 1987 accounts, incorporating an unqualified auditors' report, have been delivered to the Registrar of Companies.

Example 19: Comprehensive disclosure (continued)

Nestlé - Rowntree takeover 1988
Extract from Rowntree (target) defence document dated 26/5/1988

Profit forecast (continued)
Notes
(i) *Geographical analysis of turnover and trading profit of continuing businesses.*

	Turnover		*Trading Profit*	
	1988 *Forecast* £'m	1987 *Actual* £'m	1988 *Forecast* £'m	1987 *Actual* £'m
Confectionery				
United Kingdom	470.8	440.5	64.5	51.2
Ireland	24.5	24.0	2.7	2.1
Continental Europe	312.7	300.4	15.3	11.0
North America	213.9	214.9	22.8	23.1
Australasia	61.4	57.1	6.3	4.7
Rest of the world	88.8	87.6	12.5	11.7
	1,172.1	1,124.5	124.1	103.8
Other	123.1	111.3	13.8	11.8
Total	1,295.2	1,235.8	137.9	115.6

(ii) *Snackfood businesses*
The 1987 figures for turnover to trading profit of continuing businesses have been restated to exclude the results of Rowntree Snack Foods Limited, which was sold on 6th April, 1988 and Tom's Foods Inc., the sale of which is expected to be completed by 26th June, 1988.
(iii) *Taxation*
The forecast taxation charge is stated after taking the net benefit of relief for Advance Corporation Tax of £5.0 million in 1988 (*1987: £3.8 million).*
(iv) *Extraordinary items*
Extraordinary items in 1988 represent the net profit on the disposals of the Group's snack food businesses.
The costs relating to the offer by Nestlé have not been taken into account.
(v) *Earnings per share*
Forecast earnings per share for 1988 are based on the estimated weighted average number of shares in issue during the year assuming that no further shares will be issued after 24th May, 1988.

Bases
The profit forecast has been made on the basis of the results shown by the unaudited management accounts for the 16 weeks ended 23rd April, 1988 and on the principal assumptions set out below.

Assumptions
General
(i) The Group's composition, (subject to the sale of Tom's Foods Inc. referred to below), its present management an its accounting policies will remain the same.
(ii) There will be no significant changes in legislation adversely affecting the Group's operations.
(iii) Trading results will not be affected by industrial disputes in the Group's factories or in those of its principal suppliers.

Example 19: Comprehensive disclosure (continued)

Nestlé - Rowntree takeover 1988
Extract from Rowntree (target) defence document dated 26/5/1988

Profit forecast (continued)
Exchange rates
There will be no material change in foreign currency exchange rate from current rates.
Interest rates
Interest rates will not change materially from those currently prevailing.
Taxation
The bases and rates of taxation, both direct and indirect, will not change materially in any of the countries in which the Group has significant operations.
Tom's Foods
The sale of Tom's Foods Inc. will be completed by 26th June, 1988 at a net sale price of US$200 million.

Dixons Group also presented a very comprehensive forecast, disclosing 15 items and 15 assumptions. Forecast profits benefited from a number of changes in accounting. Note (1) shows that the company changed its accounting policy for pensions and did not restate the previous year's results. In addition, note (7) discloses the release of £10m *'from the release of surplus provisions in respect of extended warranty policies'*. It would seem that assumptions (1) and (5) give the company plenty of potential excuses if the forecast is subsequently not met.

Example 20: Comprehensive disclosure

Kingfisher - Dixons Group takeover bid 1990
Extract from defence document of Dixons Group (target) dated 9/1/1990

PROFIT FORECAST AND DIVISIONAL ANALYSIS
1. PROFIT FORECAST
The Directors of Dixons Group plc forecast that, in the absence of unforeseen circumstances and on the bases and assumptions set out below, profit on ordinary activities before tax of the Group for the 52 weeks ending 28 April 1990 will be not less than £70 million and earnings per share will be not less than 11 pence.

Basis of Forecast
The profit forecast is made on the basis of the unaudited management accounts for the 28 weeks ended 11 November 1989 and of a forecast for the remaining period to 28 April 1990, including a review of actual sales and margins for the period to 30 December 1989 and of sales to 6 January 1990. The forecast is based on the accounting policies set out in the 1988/89 Annual Report, except that Statement of Standard Accounting Practice Number 24 "Accounting for Pension Costs" has been implemented. The prior year has not been restated.
In preparing the forecast no account has been taken of the costs incurred as a result of the offer by Kingfisher, which will be treated as an extraordinary item.

Example 20: Comprehensive disclosure (continued)

Kingfisher - Dixons Group takeover bid 1990
Extract from defence document of Dixons Group (target) dated 9/1/1990

PROFIT FORECAST AND DIVISIONAL ANALYSIS (continued)
Assumptions
The forecast for the year ending 28 April 1990 has been prepared on the basis of the following principal assumptions:

(1) The Group will remain independent and the existing composition of the Group, its management and its commercial and accounting policies will remain unchanged.
(2) There will be no significant adverse change in relevant interest, exchange or inflation rates or in the economies in which the Group operates.
(3) There will be no significant adverse change in the rates and bases of taxation affecting the Group or in the legislative, political or competitive environments in which the Group operates.
(4) The Group's results will not be adversely affected to a significant extent by abnormal weather conditions, and there will be no significant effect on its business as a result of industrial disputes or civil disturbances.
(5) Sales, sales mix and margins will follow normal seasonal patterns having regard to current trends.

2. DIVISIONAL ANALYSIS
The Directors expect that the results by division comprising the total figure which has been forecast in Paragraph 1 of this Appendix will be approximately as follows:

	1989/90	1988/89
	£ million	£ million
UK - Retail	3	30.1
- Retail Financial Services	37	13.5
Total UK Retail	40	43.6
US Retail	10	14.4
Total Retail	50	58.0
Property Division	20	20.4
Profit on ordinary activities before tax	70	78.4

3. NOTES
(1) The Group is implementing SSAP 24 in the accounts for the year ending 28 April 1990. Willis Consulting Limited, the actuaries of the Group's UK pension scheme, have advised that there was a surplus on the scheme of £49 million as at 6 April 1989, and amortisation of the pension surplus in accordance with SSAP 24 over the average remaining service period of current employees would result in a potential credit to profit in respect of UK pensions of £7.0 million; the regular pension cost would have been £3.3 million. The Directors are, however, limiting the amount of the potential credit recognised in the current year by reducing the UK pension charge to nil.
(2) The funding of the Group's US pension plans was considered by their actuary to be satisfactory at the last valuation date (1 January 1989). The expected charge for the full year ending 28 April 1990 for contributions to these plans is £0.5 million.

Example 20: Comprehensive disclosure (continued)

Kingfisher - Dixons Group takeover bid 1990
Extract from defence document of Dixons Group (target) dated 9/1/1990

PROFIT FORECAST AND DIVISIONAL ANALYSIS (continued)

(3) Following the acquisition of Cyclops Corporation (now Silo) and the subsequent disposal of the Industrial Division of that company, the Group retained the liability for the retirement medical benefits payable in respect of former employees (steelworkers) of the Industrial Division. The present value of the liability, after taking account of related tax benefits, and the assets to fund it are retained on the Group's balance sheet. The first triennial actuarial valuation of these liabilities since acquisition has now taken place and this has resulted in an overall increase of approximately £3 million in the liability. The increase arises principally from inclusion in the valuation of the estimated costs of administering the scheme. The Directors intend to account for this as an adjustment to goodwill.

(4) UK-Retail profit for the year ending 28 April 1990 does not include any profits on property disposals except for £0.1 million of profits on disposal of short leasehold retail premises net of associated closure costs (1988/89 £0.6 million).

(5) UK-Retail profit before tax includes £1.1 million from discontinued businesses (1988/89 £0.3 million). This represents the net surplus on disposal of the film processing and satellite receiver installation businesses of the Group together with the trading results of these businesses up to the respective dates of sale.

(6) UK-Retail profit before tax for the year ending 28 April 1990 includes a nil net interest charge (1988/89 £1.6 million charge). US Retail profit before tax for the year ending 28 April 1990 includes a net interest charge of £1.2 million (1988/89 £0.7 million).

(7) The profit before tax of Retail Financial Services includes £10 million arising from the release of surplus provisions in respect of extended warranty policies in force as at 29 April 1989 following an independent actuarial review. This review has shown a total surplus of £30 million. If claims experience remains as currently projected, the balance of the surplus of £20 million will be considered for release to profit in the years 1990/91 and 1991/92).

(8) Silo has announced its planned entry into Los Angeles through the acquisition of the Federated Group stores in that area. The stores will be refitted as Silo. It is expected that this transaction will be completed in the near future and that the stores will open early in the next financial year. Interest and occupancy costs (estimated at $2.5 million) prior to opening will be capitalised. The total acquisition cost, including capitalised interest and occupancy, is not expected to exceed the fair market value of the acquired leases. Other pre-opening costs are being expensed and $0.4 million is provided in US Retail for the year ending 28 April 1990.

(9) Profits on the sale of Currys freeholds are reported within the Property Division. These profits are expected to represent 13 per cent of the Division's gross profit for the year ending 28 April 1990 (1988/89 21 per cent).

(10) The Group's tax charge for the year ending 28 April 1990 is estimated at 25.5 per cent reflecting the incidence and nature of profits arising in different jurisdictions.

(11) Earnings per share for the year ending 28 April 1990 have been computed on the basis of an estimated weighted average number of ordinary shares in issue in the period (383.9 million), after deducting minority interests (£0.6 million) and dividends on convertible preference shares (£9.3 million).

Copson Group's forecast is unusual in that it disclosed considerable detail (13 items) but no assumptions. Nearly all interviewees expressed a preference for no assumptions because assumptions reduce the certainty of a forecast being achieved.

Example 21: Comprehensive disclosure and no assumptions

Kanta Enterprises - F. Copson takeover 1991
Extract from recommended proposals document

Estimates of results of the Copson Group for the year ended 30th April, 1991
1. Estimate of results
The Board of Copson estimates that, in the absence of unforeseen circumstances and on the basis set out below, the loss on ordinary activities before taxation, the exceptional items taxation and the extraordinary item for the financial year ended 30th April, 1991 were as follows:

	Notes	*£'000*
Profit on ordinary activities before taxation and exceptional item:		
- hotels and nursing homes		376
- builders' merchants		-
Exceptional item	(a)	(2,332)
Loss on ordinary activities before taxation		(1,956)
Taxation	(b)	(129)
Loss on ordinary activities after taxation		(2,085)
Extraordinary item	(c)	(1,214)
Retained Loss		(3,299)
Loss per share	(d)	17.9p

Notes:
(a) The exceptional charge of £2,332,000 represents the deficit arising on revaluation of certain of the Group's properties, further details of which are set out in Appendix V.
(b) The taxation charge of £129,000 represents the write-off of irrecoverable Advance Corporation Tax.
(c) The extraordinary charge of £1,214,000 represents additional losses on disposal and closure costs of the Group's builders' merchants activities.
(d) The loss per share has been calculated by dividing the loss on ordinary activities after taxation of £2,085,000 by the weighed average number of Ordinary Shares in issue during the year of 11,653,000.

There were a number of instances of companies disclosing more than one forecast. Ward White disclosed a forecast on 19/7/1989 and an estimate on 12/8/1989. The forecasts were £33 million and £34.1 million profit before tax and 11.8p and 12.2p fully diluted earnings per share. The first forecast disclosed five items and 13 assumptions.

Example 22: First forecast

Boots - Ward White takeover 1989
Extract from defence document dated 19/7/1989

Your Directors are forecasting that profit before tax for the six months ending 31st July, 1989 will be approximately £33 million and earnings per share will be approximately 11.8p, representing increases of 19.1 and 13.5 per cent. respectively over the same period last year. Your Directors expect that the group tax charge will continue to be significantly below 35 per cent. as a result of factors that include the on-going investment in new stores. The profit forecast is set out in Appendix 1.

Appendix 1

Information relating to the profit forecast

1. Profit forecast

The Directors of Ward White Group plc ("Ward White") forecast that, in the absence of unforeseen circumstances and on the bases and assumptions set out below, the profit before taxation and fully diluted earnings per share of Ward White and its subsidiary and associated companies ("the Group") for the six months ending 31st July 1989 will be approximately £33 million and 11.8p respectively.

2. Bases of preparation

(i) The forecast set out above is based on unaudited management accounts for the period ended 3rd June, 1989, supplemented by subsequent weekly data on sales, and on detailed forecasts for June and July.

(ii) The forecast is presented under the historical cost convention, modified by the revaluation of freehold and certain long leasehold properties, and has been prepared in accordance with the accounting policies described in Ward White's latest published Report and Accounts.

(iii) No account has been taken of expenses incurred in connection with the offers made by Boots.

(iv) Fully diluted earnings per share are calculated on an assumed weighted average of 200.1 million ordinary shares in issue after allowing for full conversion rights attached to the convertible redeemable preference shares. The potential dilution arising from options granted under the share option schemes is not material.

3. Assumptions

The principal assumptions on which the profit forecast is based are as follows:

(i) the Group's composition, its current management and the commercial and trading policies and practices of Ward White and its operating subsidiaries will remain unchanged;

(ii) the Group, its customers and suppliers will not be materially affected by industrial action, political developments or any Governmental action, including changes in direct or indirect taxation; and

(iii) the general level of interest rates, exchange rates, retail demand and inflation will remain at approximately present levels.

Content of disclosures in the second estimate include more items but fewer assumptions (18 items, three assumptions). A segmental analysis is disclosed '*in response to criticism*'.

Example 23: Second 'estimate'

Boots - Ward White takeover 1989
Extract from defence document dated 12/8/1989

Estimate of interim results
We have previously forecast Ward White's profit before taxation and fully diluted earnings per share for the six months to 31st July, 1989. Our full interim statement would normally be published on 12th September. To demonstrate the continuing performance of each of Ward White's divisions in this period we are now publishing a detailed estimate of these results, including a segmental analysis in response to criticism. This estimate, which is set out in Appendix 1 and is summarised below, exceeds our earlier forecast.

Appendix 1
Estimated interim results for the six months ended 31st July, 1989

Set out below are the estimated interim results of the Ward White group for the six months ended 31st July, 1989 (the "estimated interim results"), together with comparative figures.

Year ended 31st January, 1989 £ million		Six months ended 31st July, 1989 £ million	1988 £ million
734.6	**Turnover**	405.5	342.3
83.5	**Operating profit**	39.1	30.1
0.4	Share of profit of related companies	--	0.7
(7.3)	Interest	(4.9)	(3.1)
76.6	**Profit on ordinary activities before taxation**	34.2	27.7
23.1	Tax on profit on ordinary activities	9.7	9.4
53.5	**Profit on ordinary activities after taxation**	24.5	18.3
27.7	Extraordinary items (net of tax)	(0.5)	17.1
81.2	**Profit for the period**	24.0	35.4
(12.1)	Preference dividends	(7.2)	(7.2)
69.1	**Profit attributable to ordinary shareholders**	16.8	28.2
10.5p	Dividend per ordinary share	3.6p	3.0p
	Earnings per ordinary share:		
34.9p	Basic	14.6p	9.4p
28.5p	Fully diluted	12.2p	10.4p

Segmental estimates of turnover and operating profit
Set out below are estimates of the turnover and operating profit of each of the divisions of Ward White for the six months ended 31st July, 1989.

	Six months ended 31st July, 1989		31st July, 1988	
	Turnover £ million	Operating profit £ million	Turnover £ million	Operating profit £ million
Home DIY products	181.3	19.2	133.1	15.6
Halfords	110.2	9.7	85.3	6.2
USA autoparts and accessories	85.0	7.8	48.2	6.1
Other activities	29.0	2.4	75.7	2.2
	405.5	39.1	342.3	30.1

Example 23: Second 'estimate' (continued)

Boots - Ward White takeover 1989
Extract from defence document dated 12/8/1989

Estimate of interim results (continued)
Notes

(a) The estimated interim results set out in this appendix are based on management accounts for the period ended 1st July, 1989 and a detailed estimate of results for the remainder of July incorporating actual sales figures. It is intended that actual interim results will be prepared in due course and will then be sent to the ordinary, preference and convertible preference shareholders.

(b) The estimated interim results are unaudited and are prepared under the historical cost convention, modified by the revaluation of freehold and certain long leasehold properties and have been prepared in accordance with the accounting policies described in Ward White's latest published Report and Accounts.

(c) Basic earnings per share are calculated on the weighted average of 118.5 million ordinary shares in issue during the six months ended 31st July, 1989 and profit before extraordinary items (but after preference dividends) of £17.3 million. Fully diluted earnings per ordinary share are calculated on the weighted average of 200.1 million ordinary shares in issue after allowing for full conversion rights attached to the convertible redeemable preference shares.

(d) Operating profit includes profit of £2.4 million (1988 £1.2 million) relating to retail property and developments. This includes all profits arising from the active management of the group's property portfolio, which can be categorised as shown below.

	Six months ended	
	31st July, 1989	31st July, 1988
	£ million	£ million
Net surplus on sale of retail property	2.2	0.1
Restructuring of leases	0.3	0.8
Development profit/(loss)	(0.1)	0.3
	2.4	1.2

(e) The tax charge reflects the expectation of the full year tax charge. The main factors expected to affect the charge, compared with the year ended 31st January, 1989 are:

	Year ending	Year ended
	31st January, 1990	31st January, 1989
	%	%
Standard UK tax rate	35.0	35.0
Accelerated capital allowances	(1.5)	(0.9)
Profits sheltered by roll-over relief and capital losses	(2.0)	(2.3)
Adjustments in respect of prior years' tax charges (see below)	(4.2)	(2.6)
Other	1.1	1.0
	28.4	30.2

In the current year the adjustment in respect of prior years' tax charges is principally due to the release of deferred tax provisions no longer required as a result of the considerable investment in new stores. This investment programme is expected to continue and the Directors of Ward White expect that the group tax charge will continue to be significantly below 35 per cent.
Tax on profit on ordinary activities includes £2.9 million (1988 £2.6 million) in respect of overseas companies.

Example 23: Second 'estimate' (continued)

Boots - Ward White takeover 1989
Extract from defence document dated 12/8/1989

Estimate of interim results (continued)

(f) Extraordinary items in 1989 primarily relate to a loss on disposal of listed investments, and exclude any expenses incurred in connection with the offers made by Boots.

(g) The interim dividend of 3.6p per ordinary share (1988 3.0p) amounts to £4.3 million (1988 £3.6 million).

(h) The results for the year ended 31st January, 1989 are abridged from the full accounts for the period, which received an unqualified audit report and have been filed with the Registrar of Companies.

Elsevier and Reed, unusually, presented a combined forecast as well as individual forecasts for each company. Reed's forecast is shown earlier(example 15).

Example 24: Combined forecast

Elsevier - Reed International takeover 1992
Extract from proposed merger document

Financial strength

Reed Elsevier will be one of the world's largest publishing and information groups. Its scale and financial strength will create a sound basis for the development of new products and penetration into new markets.

Pro forma aggregate figures	**£ million**	**Dfl million**
Market capitalisation at 28 October 1992	5,872	16,089
	12 months ending 31 December 1992 Forecast	
Turnover	2,455	7,660
Profit before tax	430	1,340
Interest cover	16x	

Combined summarised pro forma financial information concerning the merged group and details of its basis of preparation are set out in Appendix 1.

5. Assumptions disclosed

Chapter 12, paragraph 12.23 of the Stock Exchange's '*Yellow Book*' states that the principal assumptions on which the profit forecast is based must be included with the forecast. Assumptions must relate to matters outside the control of the directors, must be readily understandable by investors, must be specific about the particular aspect of the forecast referred to and about the related uncertainty, must relate only to material uncertainties and must not include the business estimates underlying the forecast.

Section K of the City Code on Takeovers and Mergers states that any document in which a forecast appears must reproduce the assumptions, including commercial assumptions, on which the forecast has been based.

Most assumptions disclosed in forecasts follow a standard wording. One interviewee stated (see comment 147 appendix 2) '*We always had major problems with the advisors in this area. All our first draft forecasts spelled out the real material assumptions on which the forecast was based. But by the time the forecast got published, these assumptions had become meaningless and were converted to fairly standard assumptions followed by all companies*'. An advisor referred to the importance of business-specific assumptions (see comment 140 appendix 2) '*There are a number of very similar standard assumptions used in forecasts. The ones to be interested in are those specifically related to the company*'. P. J.Carroll's assumptions are fairly standard except for assumption (b).

Example 25: Bases of calculation and assumptions

Rothmans International - P.J.Carroll takeover 1990
Extract from recommended cash offers document

2. Bases of calculation
The forecasts have been made by reference to:
(a) the unaudited management accounts for the five months ended 31st August, 1990; and
(b) forecasts for the remaining seven months of the financial year.

The accounting policies adopted in preparing the forecasts are consistent with those normally adopted by Carrolls, as set out in the audited accounts for the period ended 31st March, 1990.

The calculation of earnings per share has been based on the profit after taxation attributable to Carroll's Ordinary shareholders and the weighted average number of Carrolls Ordinary shares in issue during the year ending 31st March, 1991 of 74,393,163 on the assumption that no further Carrolls Ordinary shares are issued. Earnings per share would not be materially affected by the exercise of all outstanding options.

Example 25: Bases of calculation and assumptions (continued)

Rothmans International - P.J.Carroll takeover 1990
Extract from recommended cash offers document

3. Assumptions
The principal assumptions upon which the forecasts have been based are as follows:

(a) For the period from 1st September, 1990 to 31st March, 1991 the revenue from and gross margin on tobacco sales will be approximately the same as those experienced in the period from 1st September, 1989 to 31st March, 1990.

(b) The recent severe mortality problem, which is so far affecting only the 1990 crop of salmon smolts will revert to normal industry levels by mid-November, 1990. Should the mortality problem continue at the present level beyond that time, without compensating remedial action being effective, the loss of IR£0.6 million for the Aquaculture Division for the year ending 31st March, 1991 included in the forecast would increase at the rate of approximately IR£0.9 million per month up to a maximum of IR£3.9 million in the event of a total loss of the 1990 crop of salmon smolts; any such further losses would qualify for taxation relief at a rate of approximately 10 per cent.

(c) Other salmon stocks will not be materially affected by mortalities or abnormal weather conditions.

(d) Trading arrangements with principal suppliers, agents and customers will remain uninterrupted and no major suppliers, agent or customer will fail to meet its commitments.

(e) Operations will not be materially affected by industrial disputes or breakdowns within the Carrolls Group or its major suppliers, agents or customers or by litigation or changes in legislation.

(f) There will be no material change in the bases and rates of excise duties and other taxation, or in economic conditions, interest rates or exchange rates.

(g) The executive management of Carrolls, its policies and operational activities will remain unaltered prior to the publication of the audited accounts for the year ending 31st March, 1991.

The assumption disclosed by Highland Participants concerning shiprepair, shipbuilding and oil bunkering is very detailed and very company-specific. The wording used creates considerable uncertainty about the forecast.

Example 26: Assumptions disclosed

Cornwall Trust - Highland Participants takeover 1989
Extract from recommended offer document
Highland profit forecast for the year ending 31 December 1989
1. Profit Forecast
The Directors of Highland forecast that, in the absence of unforeseen circumstances and on the bases and principal assumptions set out below, the Group's consolidated profit before tax and extraordinary items for the year ending 31 December 1989 will be approximately £6.9 million. The Directors estimate that the tax rate for 1989 will be approximately 36 per cent. and that net extraordinary gains will be £3.0 million (principally relating to the Proposed Disposal). The forecast earnings per share for the year is 12.2p; based on 36,299,651 ordinary shares in issue. This forecast takes no account of investment income generated from the proceeds of the Proposed Disposal.

Example 26: Assumptions disclosed (continued)

Cornwall Trust - Highland Participants takeover 1989
Extract from recommended offer document

Highland profit forecast for the year ending 31 December 1989 (continued)
a. Bases and principal assumptions
This forecast is based on the unaudited management accounts of the Group for the nine months ended 30 September 1989 and on the Directors' forecast for the three months ending 31 December 1989. This forecast has been prepared using the accounting policies normally adopted by the Group.
Shiprepair, shipbuilding and oil bunkering are volatile businesses. The nature of these businesses requires the Directors to estimate the likely levels of labour utilisation and man-hour rates in shiprepair and shipbuilding, and trading volumes in oil bunkering. Variations in the level of these assumed factors will affect the income receive by the Group. There is no assurance, therefore, that the assumed levels will be achieved. In addition, the Group's operations are becoming more concentrated in the property market. Therefore, the Group's profit is increasingly sensitive to fluctuations in this market. The forecast includes a profit of £1 million on a property disposal which is anticipated to be completed before the year end.
The forecast for the three months ending 31 December 1989 assumes the following levels of activity for the shiprepair, shipbuilding and oil bunkering businesses of Highland: average labour utilisation levels and man-hour rates in shiprepair and shipbuilding activities are similar to those achieved in the last quarter of 1988 and oil bunkering volumes increase at a rate similar to the rate of growth experienced in the first nine months of 1989. The Directors believe that the estimates for these variables upon which their forecast is based will be achieved.
This forecast assumes that there will be no strikes, disasters, natural or otherwise, or changes in current legislation.

Sears attacks Freemans for its choice of assumptions.

Example 27: Attack on assumptions in forecast

Sears - Freemans takeover 1988
Extract from letter to shareholders from Sears (Bidder) dated 14/4/1988

FREEMANS DISMAL PROFIT FORECAST...
1987/88 has been a year of real decline for Freemans (extract)
The forecast is based on the assumptions that there will be no bad weather or disruption of distribution (problems which have already occurred earlier this year) and relies on an unusual assumption - that stocks which Freemans holds for Spring/Summer 1988 prove to be "in accordance with the levels in previous years". Given the errors made by your Board in the current year - too much stock in June, too little stock in October - this injects further uncertainty into the forecast.

6. Accounting policies disclosed

The Stock Exchange's '*Yellow book*' requires the reporting accountants to state that the profit forecast is presented on a basis consistent with the accounting policies of the company or group in question.

Note 1(c) of Rule 28.2 of the City Code on Takeovers and Mergers states that the reporting accountants must satisfy themselves that the forecast, so far as accounting policies and calculations are concerned, has been properly compiled on the basis of the assumptions made. Most forecasts state that consistent accounting policies are followed. Dixon's forecast (example 20) includes two changes of accounting policy/estimate. In its forecast, Irish Distillers changed its accounting policy, to capitalise interest for the first time. In contested bids, companies changing accounting policies for the purpose of a forecast run the risk of being attacked by the other side. Such was the case for Irish Distillers.

Example 28: Change in accounting policy
GC&C Brands - Irish Distillers takeover bid 1988
Extract from Irish Distillers (Target) defence document
1. Profit before tax and earnings per share forecasts (extract)
The accounting policies adopted in preparing the forecasts are consistent with those normally adopted by the Group, as set out in the audited accounts for the year ended 30th September, 1987, other than a change in accounting policy to include interest on designated loans in maturing whiskey stocks.
Maturing whiskey stocks at 30th September, 1988 will be valued on the basis adopted hitherto but, instead of excluding all interest from overheads, interest on designated loans directly related to maturing whiskey stocks will be attributed to those stocks that are within their normal maturation period. On the previous basis, the profit before taxation and earnings per share now forecast would have been lower by IR£848,000 and 1.21p respectively. For the year ended 30th September, 1987, the profit before taxation on the new basis would not have differed materially from the published figure.

Example 29: Attack on change in accounting policy
GC&C Brands - Irish Distillers takeover bid 1988
Extract from GC&C Brands (Bidder) letter to Irish Distillers (target) shareholders dated 12/7/1988
The Board's latest profit forecast (the second in six weeks) is helped by a timely change in accounting policy and once-off rationalisation benefits. **These cannot disguise the continuing poor trading performance.**

Shareholders should note that more than 75 per cent. of the forecast increase in pre-tax profits is due to the reduction in costs following last year's redundancy and rationalisation programme and to a material change in accounting policy.

Magnet changed its accounting policy for depreciation to the benefit of forecast profits even though the bid was not contested.

Example 30: Change in accounting policy

DMSWL - Magnet Group takeover 1989
Extract from recommended offers document forecasting net assets of Magnet (Target)

Bases of Estimate
The estimate has been prepared on the basis of the accounting policies consistently adopted by Magnet, save that the Magnet Group has discontinued the provision of depreciation of freehold and long leasehold buildings, it being the Magnet Group's policy to maintain them in such condition that the estimated residual values are at least equal to the net book values in the accounts. The charge under the previous policy for the year to 1st April, 1989 would have been approximately £250,000.
The Group has continued its policy of deferring certain store opening expenses and is amortising these costs over two years. A formal accounting policy for this procedure will be defined in the accounts to 1st April, 1989.

Highland Electronics changed its accounting policy, not to fight off the bid, but to be consistent with policies adopted by the bidder, Arlen.

Example 31: Change in accounting policy

Arlen - Highland Electronics takeover 1990
Extract from listing particulars

2. Basis of profit estimate (extract)
In preparing the financial information on the Highland Group in Part V of these Listing Particulars and the estimates of the Highland Group's profit before taxation and of extraordinary charges for the year ended 30th April 1990, the same accounting policies have been used as those normally adopted in the preparation of the statutory accounts of the Highland Group save that, in order to bring the principal accounting policies into line with those of the Arlen Group, the accounting policy of the Highland Group relating to research and development expenditure has been changed so as to write off development expenditure as incurred. Consequently, development expenditure of approximately £121,000 incurred during the year ended 30th April 1990 has been written off to the profit and loss account in arriving at the Highland Group's estimated profit before taxation for that year.

Elsevier, a Dutch company, stated that the accounting policies normally followed by the company were adjusted to convert Dutch generally accepted accounting principles (GAAP) to UK GAAP.

Example 32: Adjustment of accounting policies

Elsevier - Reed International takeover 1992
Extract from proposed merger document

D. Profit Forecast (extract)
The forecasts of consolidated profit before tax and earnings per share have been prepared using accounting policies normally adopted by Elsevier, as adjusted to conform with presentation under U.K. GAAP. They are based upon the published unaudited interim results for the six months ended 30 June 1992, the results shown by unaudited management accounts for the three months ended 30 September 1992 and forecasts for the three months ending 31 December 1992.
The restatement of Elsevier's profit after tax from Dutch GAAP to U.K. GAAP for the two years ending 31 December 1992 is shown below:

RECONCILATION FROM DUTCH to UK GAAP	1991 Dfl million	Forecast 1992 Dfl million
Profit after tax under Dutch GAAP as shown in Appendix 2, section B (1991 only)	380	442
Reclassification of extraordinary items	(12)	(14)
Profit after tax under U.K. GAAP as shown above	368	428

Telephone Rentals used merger accounting, rather than the more usual acquisition accounting, to include the results of a newly acquired subsidiary. Group profits were adjusted upwards as a consequence.

Example 33: New accounting policy

Cable and Wireless - Telephone Rentals takeover 1988
Extract from defence document dated 16/11/1988

1. Profit forecast (extract)
The results of Sound Systems plc, acquired on 29th July 1988, have been accounted for on a merger accounting basis.

Notes: (extract)
(g) The graphs on pages 2 and 3 of this document have been derived from the published accounts of Telephone Rentals, together with the profit and dividend forecasts contained in this document.

The group pre-tax profit figures for 1985, 1986 and 1987 have been restated to reflect the consolidation of Sound Systems plc on a merger accounting basis, as follows:

	1985 (£000s)	1986 (£000s)	1987 (£000s)
As originally published	15,659	17,236	19,626
As adjusted	15,915	17,391	19,902

There is no effect on reported earnings per share in respect of 1986 and 1987.

7. Forecast profits not reported on

Many takeover documents refer to future profitability which, without amounting to a formal profit forecast, intimates information concerning future results. Tootal refers to expected improvement in profitability '*over and above ... this year's profit forecast*'. This appears to be a forecast and yet has not been treated as such or reported on by accountants in the takeover document.

Example 34: Forecast profit not reported on

Coates Viyella - Tootal takeover 1991
Extract from defence document dated 27/4/1991 of Tootal (Target)

Tootal's action to improve profitability for the future
In each of its core businesses, Tootal has a number of specific projects whose contribution to profitability is expected to improve next year by some £7.5 million. This is over and above any contribution from these projects to this year's profit forecast and does not include the effects of a general improvement in trading conditions. As described on pages 6 and 7, the investments for these projects are either in place or at a sufficiently advanced stage of implementation to offer clear prospects of improved profitability in 1992/93.

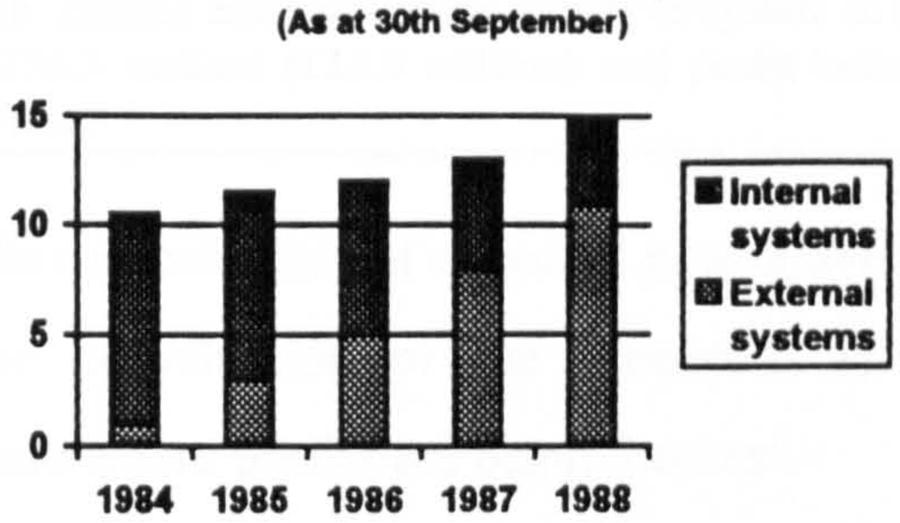
A number of specific projects are being implemented in each of Tootal's core businesses which are expected to improve profitability. Some of these projects will begin delivering benefits during the current year - a total of £2.5 million of trading profits is included in the forecast for this year. Whilst it is not possible at this stage to forecast profits for 1992/93, it is expected that the contribution to profitability from these projects will further improve by some £7.5 million in that year. In addition, other opportunities for improved profitability will arise from normal sales and marketing initiatives, minor investments and any increases in overall demand resulting from the expected upturn in the textile cycle.

The information for Telephone Rental's graph of annual rent receivable comes (according to the sources of information note) from the management accounts. Telephone Rentals disclosed a forecast for the year to 31/12/1988, but this forecast did not include forecast rent receivable. Thus, the graph includes data which has not been reported on by accountants.

Example 35: Forecast revenue not reported on

Cable and Wireless - Telephone Rentals takeover 1988
Extract from defence document dated 24/10/1988

The following graph demonstrates TR's success in replacing its income from the declining market for internal telephone systems with income from the liberalised market for external systems.



9. Sources of information

The graphs and accompanying commentary on pages 5 and 8 of this document, and the chart and accompanying commentary on page 6 of this document and references to the turnover or trading profits in individual activities of subsidiaries of TR, are based on the following information derived from the management accounts of TR:

Annual Rent Receivable - UK Telephones (as at 30th September)

	1984 (£000s)	1985 (£000s)	1986 (£000s)	1987 (£000s)	1988 (£000s)
Internal Systems	9,147	7,449	6,068	4,790	3,923
External Systems	1,129	3,385	5,713	8,221	11,325
	10,276	10,834	11,781	13,011	15,248

Rental Base in the UK (as at 31st December)

	1982 (£000s)	1987 (£000s)
Telephones External	--	8,777
Data Communications	1,582	4,295
Maintenance	341	3,974
Telex	--	2,755
Broadcast (including Personal Call)	4,693	5,960
Time & Security	5,381	7,488
Telephones Internal	10,348	4,672
	22,345	37,921

Overseas Turnover (years ended 31st December)

	1983 (£000s)	1984 (£000s)	1985 (£000s)	1986 (£000s)	1987 (£000s)
Europe	11,120	12,219	12,690	12,957	14,921
North America	2,609	3,231	3,949	5,923	6,811
South Africa	1,694	2,005	2,863	3,672	4,565
	15,423	17,455	19,502	22,552	26,297

Overseas Turnover has been translated at the rates of exchange ruling at 31st December 1987.

Saint-Gobain also disclosed '*management estimates*' which were not reported on.

Example 36: Forecast revenue not reported on

Saint-Gobain - TSL Group takeover 1988
Extract from recommended cash offer document

Management estimates of the results of Quartz & Silice for 1987 show turnover of FF235.5 million (£23.5 million) and profit before tax of FF22.7 million (£2.3 million).

DRG refers to estimates of expected profits over the next eight years. Although a certificate of valuation of the properties is provided, this does not seem appropriate where profits are being forecast.

Example 37: Forecast profit not reported on

Pembridge Associates - DRG takeover 1989
Extract from defence document dated 31/10/1989

Our programme of disposals is expected to generate profits, after costs and tax, AT TODAY'S PRICES, of about £90 million over the next 8 years (1990-1997) of which at least £50 million will be realised over the next 5 years (1990-1994).

Some companies included projections in the takeover documents which were specifically referred to as not being forecasts (and therefore were not reported on). The extract below from De La Rue's defence document illustrates the point, as does example 49 futher on.

Example 38: Projection 'not a forecast'

Norton Opax - De La Rue takeover bid 1989
Extract from defence document dated 9/9/1989

For illustration only, the table below sets out the arithmetic effect on Norton Opax's earnings of the implementation of the Norton Opax Final Offer for De La Rue. It is based on (i) the 1988 published audited consolidated accounts of Norton Opax as adjusted to eliminate the impact of the benefits of the pension holiday (in accordance with Statement of Standard Accounting Practice No. 24 in respect of accounting for pension contributions) and an exceptional item. The resultant profit before taxation has been increased from 1988 by 0, 15, 20 and 25 per cent. per annum respectively; and (ii) the Norton Opax estimate of De La Rue's (post Crosfield) earnings, adjusted for assumed cost savings less acquisition interest (adjusted for projected disposals) for 1990, increased by 0, 15, 20 and 25 per cent. respectively for 1991 (see paragraph 6 of the Appendix).

Example 38: Projection 'not a forecast' (continued)

Norton Opax - De La Rue takeover bid 1989
Extract from defence document dated 9/9/1989

THESE FIGURES ARE NOT TO BE TAKEN IN ANY WAY AS PROFIT FORECASTS

	Illustrative 1990			
Illustrative growth in profits	0%	15%	20%	25%
	£m	£m	£m	£m
Profit before taxation of the enlarged group	76.1	85.3	88.7	92.2
Taxation	(22.8)	(25.6)	(26.6)	(27.6)
Minorities	(3.2)	(3.2)	(3.2)	(3.2)
	50.1	56.5	58.9	61.4
Fully diluted number of ordinary shares following the Final Offer		392.4 million		
Earnings per share (p)	12.8	14.4	15.0	15.6
	Illustrative 1991			
Illustrative growth in profits	0%	15%	20%	25%
	£m	£m	£m	£m
Profit before taxation of the enlarged group	76.1	98.1	106.4	115.3
Taxation	(22.8)	(29.4)	(31.9)	(34.6)
Minorities	(3.2)	(3.7)	(3.8)	(4.0)
	50.1	65.0	70.7	76.7
Fully diluted number of ordinary shares following the Final Offer		392.4 million		
Earnings per share (p)	12.8	16.6	18.0	19.5

Although Ultramar stresses that the '*possible outcome*' is not a forecast, it is difficult to see the distinction between it and a forecast.

Example 39: Projection 'not a forecast'

LASMO - Ultramar takeover 1991
Extract from document dated 28/11/1991 from Ultramar (Target)

Prospects for 1992 and measures to improve cash flow
The prospects for 1992 are encouraging. Although it is difficult to make a forecast in respect of a year which has yet to start, your Board wishes to provide shareholders with as much guidance as it reasonably can. We have therefore combined a forecast for our upstream businesses with a projection of what might be achieved by our downstream businesses as more normal business conditions return. This implies net profit after exceptional items and earnings per share for 1992 of £126 million and 34p, respectively. It must be stressed that this is not a forecast; it illustrates what is possible as more normal business conditions return.

Adding this to the forecast post-tax operating profit for the upstream businesses, and after adjusting for group items, interest, minorities and exceptional items, as set out in Appendix III, implies net profit for the Group after exceptional items for 1992 of £126 million and earnings per share of 34p. This is not a forecast of what will happen in 1992 but an illustration of the possible outcome as more normal business conditions return.

Example 39: Projection 'not a forecast' (continued)

LASMO - Ultramar takeover 1991
Extract from document dated 28/11/1991 from Ultramar (Target)

Guidance on 1992

- It is clearly difficult to make a forecast in respect of a year which has yet to start. However, your Board wishes to provide shareholders with as much guidance as it reasonably can.

Upstream

- Our upstream businesses continue to perform well and record levels of production are expected in 1992 before taking account of any disposal of the Indonesian interests. Based on the assumptions set out in Appendix III, and in the absence of unforeseen circumstances, your Board forecasts post-tax operating profits for the upstream businesses in 1992 of the order of £68 million.

Downstream

- The results of our downstream businesses are particularly difficult to predict a long way ahead because they are very sensitive to business conditions and the weather, as well as crude oil prices. They are especially affected by refinery and retail volumes and margins, which management can only influence to a limited degree in the short term. Past experience can, however, provide some guide to the future. The following table sets out volume and margin data for the downstream businesses in Eastern Canada and California over the period 1989-1991 with our forecast for the fourth quarter of 1991 and a projection of what is possible for 1992, as more normal business conditions return:

		Eastern Canada			California		
		Product sales (million barrels)		Profit per barrel (US$)	Product sales (million barrels)		Profit per barrel (US$)
1989		45.4		2.83	43.9		1.82
1990		44.5		3.63	45.9		2.28
1991	Q1	11.1		(0.32)	10.3		(0.27)
	Q2	11.9	49.5	(2.25)	11.0	44.2	0.16
	Q3	13.2		1.02	11.4		1.25
	Q4 (forecast)	13.3		1.27	11.5		0.95
1992	(projected)	51.6		2.44	43.4		2.00

Note: Profit in the above table is post-tax operating profit.

Argyle Trust made a forecast for 1988 which was not reported on and which, most unusually, included a '*profit warranty*' from the chairman in respect of 1989. Legally, the value to shareholders of this warranty is questionable, especially in view of the limitation on Mr. Oppenheim's personal liability.

Example 40: Profit warranty

Dewey Warren - Argyle Trust takeover 1989
Extract from recommended offers document

You will, however, note that Mr. Oppenheim has (subject to certain conditions) given an irrevocable undertaking to accept the Offer in respect of the 3,610,000 Argyle Shares owned or controlled by him (representing approximately 16.9 per cent. of the present issued share capital) and has personally warranted (subject to a maximum liability on him of £500,000) that the pre-tax profits of Argyle for the year ending 31st December, 1989 will be not less than £3,000,000. Further details of the profit warranty are set out in Part 8 of the Particulars Card.

8. Other forecasts

Future orientated information, not in the nature of a formal forecast (and therefore not reported on by reporting accountants/merchant bankers), was included in offer documents in some cases. Estimates of oil and gas reserves, estimates of net asset values, estimates of copyright valuation, estimates of patent valuation and estimates of embedded values were found which were reported on by independent experts such as accountants, engineers, mining consultants, chartered surveyors, merchant bankers and actuaries. However, there were even more examples of forecast items which were not independently reported on.

Takeover documents frequently include forecasts of non financial items. Without making a profit forecast, Freemans attempts to create the impression of improving results by forecasting '*active agents*'.

Example 41: Forecast item not reported on

Sears - Freemans takeover 1988
Extract from defence document dated 11/1/1988 of Freemans (Target)

1988: Prospects (extract)
We start 1988 from an absolutely sound base. We expect to have 730,000 active agents at the start of the new financial year - an increase of almost 6 per cent over the past 12 months.

It is not uncommon to see takeover documents include reference to the size of companies' order books to give the impression of improving profitability without disclosing a formal forecast.

Example 42: Forecast item not reported on

ANI - Aurora takeover 1988
Extract from defence document dated 22/11/1988

The Group's order book has increased by more than 70 per cent. since the beginning of the year and now stands at £42 million.

Extract from defence document dated 30/11/1988

Aurora has excellent future prospects, as demonstrated by its order book which now stands at £42 million, an increase of more than 70 per cent. since the beginning of the year.

Ricardo's estimate of its order book was attacked by First Technology, the bidder.

Example 43: Forecast item not reported on and attack thereon

First Technology - Ricardo takeover bid 1989
Extract from defence document dated 10/3/1989
The offer is wholly inadequate (extract)
It does not reflect the value of Ricardo's order book of over £21 million and its excellent prospects.

Extract from increased and final offer document of First Technology (Bidder)

Ricardo order book
Considerable play was made by Ricardo in their defence document of their record order book. They said:

"Our order book, including the substantial Russian contracts, now stands at over £20 million, the highest that we have ever had."

It is interesting to recall that Ricardo's broker in a note dated 8th September, 1988 stated:

"The order book is very full at present and totals over £30 million".

There seems to be some question of just what constitutes a record order book. Furthermore, an article in Investors Chronicle, dated 18th February 1988, spoke of Russian contracts totalling £14 million. This underlines a very heavy dependence on the Eastern block.

Gold Fields projects increased interest (not defined) in gold production. Some information is provided on how these projections are arrived at.

Example 44: Forecast item not reported on

Minorco - Consolidated Gold Fields takeover bid 1988
Extract from defence document dated 15/10/1988
Sharply rising gold production (extract)
Gold Fields interest in gold production has increased by 21 per cent. over the past three years to 1.4 million ounces. By 1991 it is projected to rise by a further 44 per cent. to over 2 million ounces. This growth is the direct result of successful exploration.

Example 44: Forecast item not reported on (continued)

Minorco - Consolidated Gold Fields takeover bid 1988
Extract from defence document dated 15/10/1988

Bases and sources of financial information (extract)
(f) The projections of Gold Fields interest in gold production contained on pages 2 and 3 are derived from internal estimates prepared by the relevant members of the Gold Fields Group and are based on operating plans which assume gold prices in 1991 of US$431 per ounce, A$599 per ounce and R48,400/kg respectively for US, Australian and South African operations.

Gold Fields repeated its forecast of gold production in a subsequent bid from Minorco. The forecast did not change but the explanation of its calculation did. Most notable is the change in the rate of exchange used, which dropped from US$431 to US$ 400 per ounce. This drop in exchange rate did not, however, change the projections.

Example 45: Forecast item not reported on

Minorco - Consolidated Gold Fields takeover bid 1989
Extract from defence document dated 9/3/1989 of Gold Fields (Target)

What has this meant for you?
Gold Fields total beneficial gold production has risen 21 per cent. over the last three years to 1.4 million ounces per annum. Over the next three years, it is planned to rise a further 44 per cent. to over 2 million ounces.

Notes:
(r) The projections of Gold Fields total beneficial gold production on page 7 are to its proportionate interest in the production of its subsidiaries and associates. The projection on page 3 of Newmont Gold's gold production in 1989 and the projections of Gold Fields total beneficial gold production for 1991 have been derived from internal estimates prepared by the relevant members of the Gold Fields Group and are based on operating plans which assume gold prices in 1991 which reflect the operation on a 1989 gold price of US$400 of internal assumptions as to local inflation and exchange rates for the period 1989 to 1991.

9. Use of third party forecasts

Takeover documents frequently include forecast information of third parties such as brokers' forecasts. Coalite used brokers' forecasts in lieu of making its own forecast.

Example 46: Use of third party forecasts

Anglo United - Coalite takeover 1989
Extract from offer document

Coalite is expected to announce earnings per share of 32.9p for the year ended 31st March, 1989 (consensus of brokers' forecasts May, 1989 Earnings Guide). This represents a compound increase in earnings of only 2 per cent. per year over the last three financial years (after making an adjustment for inflation).
The Offer represents a price earnings multiple of approximately 13.6 times (based on pre-tax profits of £45.5 million of Coalite) for the period ended 31st March, 1988 and approximately 12.9 times (based on the above brokers' forecasts of pre-tax profits of £48.1 million) for the period ended 31st March, 1989.

Analysts' forecasts can be used to attack the other side's profitability.

Example 47: Use of third party forecasts

BTR - Hawker Siddeley takeover 1991
Extract from offer document

Hawker Siddeley's future prospects
Nothing in these results suggests that Hawker Siddeley's present senior management team will prove any more successful than its predecessors. An average of financial analysts' recent forecasts predicts that Hawker Siddeley's pre-tax profits will fall to £119.9 million in 1991.

Pleasurama's forecasting ability was attacked for failing to meet its own broker's forecast.

Example 48: Use of third party forecasts

Mecca - Pleasurama takeover 1988
Extract from document dated 26/9/1988 from Mecca (Bidder)

Pleasurama's results for each of the last two years have fallen significantly below market expectations, and failed to meet forecasts made by its own broker less than six weeks before the end of each trading year.

How reliable, therefore, are forecasts or predictions relating to the future performance of Pleasurama?

Mecca used brokers' forecasts to make its own projections of Pleasurama's profitability (conditional on the takeover going ahead).

Example 49: Use of third party forecasts

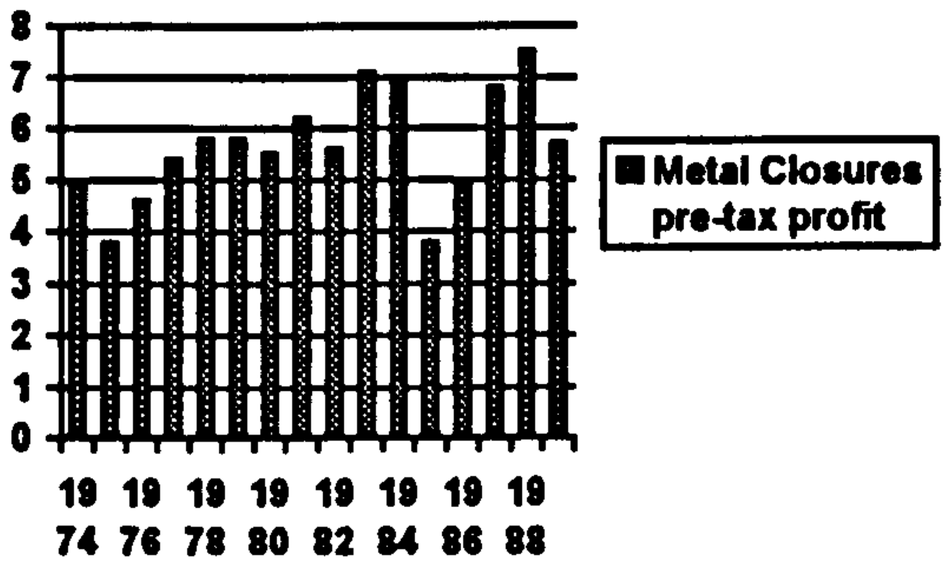
Mecca - Pleasurama takeover 1988
Extract from document dated 5/10/1988 from Mecca (Bidder)
For illustration only, the table below sets out the arithmetic effect on Mecca's earnings of the implementation of the Final Offers. It is based on the consensus profit projection for 1989 for Pleasurama, including Hard Rock, shown in the Earnings Guide for September, 1988; Mecca's forecast earnings per share (excluding property profits) for 1988 increased by 0, 10 and 20 per cent. respectively; and, incorporating illustrative levels for synergy benefits of 8, 9 and 10 per cent. of the combined group's profits before tax.

These figures are not to be taken in any way as profit forecasts.

Illustrative growth in Mecca's 1989 earnings per share compared with 1988 forecast of 14.4p	0%	10%	20%
Earnings per share	14.4p	15.8p	17.3p
Earnings enhancement or dilution in enlarged Group with synergy benefits before tax of: 8%	+6%	-1%	-7%
9%	+7%	0%	-6%
10%	+8%	+1%	-5%

The use of brokers' forecasts can be very selective. Some firms use consensus forecasts from, say, *The Earnings Guide*. Other companies use fewer (as low as one) brokers' forecasts. Wassall explained why it used only one brokers' forecast.

Example 50: Use of third party forecasts
Wassall - Metal Closures takeover 1990
Extract from offers document
James Capel's estimate of Metal Closures' pre-tax profits for the year to 31 December, 1989 is £5.7 million. If this proves accurate, these profits will be nearly 25 per cent. below the 1988 level and actually lower than those achieved in 1978, 1979, 1981, 1983, 1984 and 1987.
Profits are erratic and show no growth.



6. Sources and bases for calculations (extract)
7. Forecast pre-tax profits of Metal Closures
James Capel, Morning Meeting, 6 September, 1989. (James Capel are the only broker named in The Earnings Guide, November, 1989 edition in respect of Metal Closures.)

Coates Viyella made very full disclosure of how it calculated its consensus brokers' forecast. The note, however, does not say why those particular brokers' estimates were chosen. However, there is good explanation of why one broker's estimate was excluded from the calculation.

Example 51: Use of third party forecasts

Coates Viyella - Tootal takeover 1991
Extract from recommended offers document from Coates Viyella (Bidder)

Consensus of analysts' estimates of Tootal's earnings per share for the year ended 31st January, 1991

Date	*Name*	*Earnings per share*
27th February, 1991	James Capel & Co. Limited	4.0p
15th February, 1991	SG Warburg, Akroyd, Rowe & Pitman, Mullens Securities Limited	3.7p
8th February, 1991	Hoare Govett Investment Research Limited	4.4p
21st February, 1991	Barclays de Zoete & Bevan Research Limited	3.9p
February, 1991	UBS Phillips & Drew	4.2p
11th February, 1991	Carr Kitcat & Aitken Limited	4.2p
	Average	4.1p

In addition, in February 1991, Henry Cooke, Lumsden plc published an estimate of 6.3p for Tootal's earnings per share for the year ended 31st January, 1991, but stated that its revised estimate assumes no change in accounting practices following the management changes. As the estimate has been compiled on a basis which Coates Viyella believes to be inconsistent with the estimates which comprise the consensus estimate, it has not been included. If its estimate were included, the consensus estimate would be 4.4p.

First Technology used brokers' forecasts to attack Ricardo's forecasting ability.

Example 52: Use of third party forecast information

First Technology - Ricardo takeover bid 1989
Extract from increased and final offer document

In judging any forecast for the current year, please consider the problems Ricardo's own broker had in forecasting last year's outcome:

James Capel's forecasts for the year June 1988

Date of forecast	*Pretax profits (£m)*
Sep 1986	3.7
Feb 1987	3.0
Jun 1987	2.2
10 Feb 1988	1.8
17 Feb 1988	1.3
Actual	1.1

Sundry forecast information from other sources is used in takeover documents.

Example 53: Use of third party forecasts

Cable and Wireless - Telephone Rentals takeover 1988
Extract from defence document dated 16/11/1988

The Claims	*The Facts*
Cable and Wireless claims that TR would benefit from Mercury's customer base.	With 50,000 UK installations, TR has a substantially larger business customer base than that represented by Mercury's reported 9,000 business customers.

3. Sources of information (extract)
(a) The estimate of business customers of Mercury used on page 5 is derived from a report in the *Daily Telegraph* of 1st September 1988 relating to the launch of Mercury's customer compensation scheme.

Ruberoid used a forecast by the Building Materials Producers Association to forecast increase in business.

Example 54: Use of third party forecasts

Raine Industries - Ruberoid takeover bid 1988
Extract from defence document dated 10/8/1988

Ruberoid derives substantial business from commercial and industrial building which are forecast by the Building Material Producers Association, to enjoy increases in 1989.

Bases for information (extract)
(7) The reference on pages 6 and 8 to the forecasts by the Building Material Producers Association is taken from the 1988 report by the National Council of Building Material Producers.

Racal Electronics used third party forecasts to attack the business of the other side.

Example 55: Use of third party forecasts

Williams Holdings - Racal Electronics takeover bid 1991
Extract from defence document dated 28/11/1991

Williams sales of fire protection equipment to the civil aviation market are exposed to the forecast decline in aero engine deliveries.

Notes (extract)
(viii) Page five: The reference to the forecast decline of aero engine deliveries is taken from *The Airline Monitor*, July 1991, over the period 1991-2000.

10. Attacks on forecasts

Profit forecasts are frequently attacked in contested bids. This, to some extent, affects forecast content as the forecaster must consider what the other party's reaction to the forecast will be. Pleasurama attacked Mecca's forecast because it excluded losses of a subsidiary.

Example 56: Attack on forecast

Mecca - Pleasurama takeover 1988
Extract from defence document dated 12/10/1988

MECCA'S GROWTH: 24 OR 10 PER CENT.?
Mecca forecasts growth in earnings per share of not less than 24 per cent. (before exceptional property profits). This forecast includes the one-off benefit from the timing of the acquisition of Ladbroke Holidays. The exclusion of 3 of Ladbroke Holidays' loss making winter months is estimated to have saved £1.5 million and **next year's results will bear the full impact of these losses.** Pleasurama estimates that if this benefit had not been available and financing for the acquisition had been in place for the full year, **the pro forma growth in earnings per share (before exceptional property profits) would have been less than 10 per cent.** (assuming that Mecca's profit forecast for the year ended 30th September 1988 is exactly achieved).

Epicure attacked Habit Precision for its choice of interest rate.

Example 57: Attack on forecast

Epicure - Habit Precision Engineering takeover 1989
Letter to shareholders from Epicure (bidder) dated 26/5/1989

Profit forecast (extract)
The profit forecast assumes no increase in interest rates. Base rate has subsequently risen by one per cent. to add to the interest costs of £650,000 on an unacceptably high level of borrowings and gearing.

Accounting methods may also be attacked. Embedded value accounting, treatment of costs as extraordinary, below the line, items rather than exceptional items (and vice versa in the case of revenues), capitalisation of costs, release of unused provisions to forecast profits, accounting for subsidiaries acquired and disposed of, and treatment of pension costs are all accounting methods that were attacked.

American Brands attacked Invergordon Distillers for the sudden increase in forecast profits compared to brokers' forecasts. The forecast was attacked for manipulation of stock levels, production levels and marketing spend to the benefit of the forecast. The possible once-off release of provisions was also attacked.

Example 58: Attack on forecast

American Brands - Invergordon Distillers takeover bid 1991
Extract from increased and final cash offer document

1991 profit forecast

- The Board of Invergordon has failed to explain to shareholders why its 1991 profit forecast is suddenly so much higher than its own broker and other analysts were recently forecasting, particularly when first half turnover was significantly below brokers' forecasts.

- Shareholders need answers to the following questions
  - Stock
  How much of the forecast profit increase is the result of accelerating the sale of stocks of maturing whisky or switching from bought-in stock to cheaper company-produced stock - resulting in an unsustainable rate of profit growth?
  - Production levels
  Is your Board boosting profits by not adhering to its previously stated policy that it would cut production substantially this year? If so, more severe production cuts are likely in 1992.
  - Marketing expenditure
  How much of the forecast profit increase is the result of a reduction in much needed brand development and advertising expenditure thereby increasing Invergordon's vulnerability by allowing its small branded market share to continue to stagnate?
  - One-off release of provisions
  How much of the forecast profit increase is the result of the one-off release of balance sheet provisions?

1992 profits

- Invergordon boasts that its forecast profit is a year ahead of expectations but says absolutely nothing about prospects for 1992. In the light of 1991 forecast profits possibly boosted by one-off items and with challenging market conditions ahead, will Invergordon achieve any real growth in its operating profit in 1992 and beyond?

11. Misleading information in forecasts

Some companies were attacked for using misleading information in their forecast.

Example 59: Attack for misleading information

General Motors - SD-Scicon takeover 1991
Extract from document dated 5/7/1991 from General Motors (Bidder)
SD-Scicon multiplies its forecast profits by other software company price earnings multiples. This is misleading.

Bejam was attacked for presenting misleading comparative figures.

Example 60: Attack for misrepresentation of results

Iceland Frozen Foods - Bejam takeover 1988
Extract from document dated 18/11/1988 from Iceland Frozen Foods (Bidder)

The statistics quoted by your board on Bejam's profits disguise the all important difference in the underlying trends of our respective companies - which show Iceland is growing rapidly and Bejam is static or declining - this results from Bejam's highly selective choice of presenting only a one year comparison.

12. Dividend forecasts

In lieu of a profit forecast, many companies disclose dividend forecasts which do not have to be reported on. A forecast of dividends is not normally considered to be a profit forecast, but it will be where it is accompanied by an estimate of dividend cover (City Code, Rule 28.6 (f)).

Example 61: Dividend forecast

HSBC - Midland Bank takeover 1992
Extract from listing particulars

5. HSBC Holdings' 1991 final dividend and 1992 dividend forecast (extract)
On 10 March 1992, the Board of HSBC Holdings stated that, in the absence of unforeseen circumstances, the Directors expect to recommend dividends for 1992 of not less than HK$2.00 per share (equivalent to 14.5p at the current exchange rate), an 8.1 per cent. increase over the dividends for 1991. The Board of HSBC Holdings reaffirms this forecast which applies both to the new HSBC Holdings shares and to the existing HSBC Holdings shares.

Example 62: Dividend forecast

Raine Industries - Walter Lawrence takeover 1992
Extract from proposed acquisition document by Raine Industries (Bidder)

Current trading and prospects of Raine, and dividend forecast (extract)
The Board of Raine intends to recommend, in the absence of unforeseen circumstances, payment of a final dividend in respect of the financial year ending 30th June, 1992 of 4.0p (net) per share on the ordinary share capital of Raine, including Raine ordinary shares issued pursuant to the rights issue and the Offers.

Plessey felt unable to make a formal profit forecast but did make a dividend forecast.

Example 63: Dividend forecast

GEC Siemens - Plessey takeover 1989
Extract from defence document dated 2/9/1989

Dividend Forecast
At this early stage in Plessey's financial year and given the complications of the GPT structure, your Board feels it would not be appropriate to make a formal forecast of Plessey's profit for the year to 31 March 1990. At the same time, your Board is fully confident regarding the Company's prospects and firmly believes the future strategy for the Company, already explained to you, should produce significant benefits for shareholders.
As a measure of this confidence your Board has decided that, in the absence of unforeseen circumstances, it intends to recommend a total net dividend for the current year of 9.19p, representing an increase of 20% over last year. Since 1985 increases at the rate of 15% per annum have been achieved and taking account of the forecast dividend the income on your shares will have more than doubled over this period. This dividend forecast signifies the determination of your Board that the benefits of the Company's strategy should flow through to shareholders and its belief in the future quality of the Company's performance.

The dividend forecast is almost invariably accompanied by the wording '*in the absence of unforeseen circumstances*'. Dewey Warren did not use this phrase and, when the bid did not proceed, it reversed its dividend intentions.

Example 64: Reversal of dividend forecast

Robert Frazer - Dewey Warren takeover bid 1989
Extract from proposed acquisition document

Dividends
The Board intends, shortly after completion of the Acquisition, to declare a special interim dividend on the ordinary share capital of the Company calculated by reference to anticipated earnings in the period prior to completion of the Acquisition. The Board anticipates that this special dividend will be 6.5p net per Ordinary Share. No interest will be payable on the New Stock by reference to that special dividend.
In addition, your directors currently intend to recommend a final dividend of not less than 5p net per Ordinary Share for the period ending on 30th June, 1990.
These proposed dividends represent a gross annualised yield of not less than 8.8 per cent (see paragraph 15 of Part 10).
Thereafter, it is the present intention of the Board of Dewey Warren to adopt a policy of distributing by way of dividend the majority of its profits available for distribution to shareholders.

Agreement not to proceed document dated 2/9/1989 from Dewey Warren (Target)
Accounting reference date and future dividend policy
In view of the termination of the proposed Acquisition, the Company's accounting reference date will remain 31st December, and your Board no longer intends to recommend a final dividend for the period ending on 30th June, 1990, as had been indicated in the circular dated 20th September, 1989. The Company's future dividend policy is being reviewed by your Board.

Camford Properties devoted an entire page in its defence document to the forecast dividend.

Example 65: Dividend forecast

Adstream - Camford takeover 1990
Extract from defence document dated 15/3/1990

Forecast New Property Dividends

As funds are released from our property resources, Camford will invest the proceeds initially in the money markets and then in our growing engineering businesses. Additionally your Directors intend in future to distribute to shareholders a proportion of our property gains and the income generated therefrom. Your Board forecasts that Camford will, in the absence of unforeseen circumstances, pay annual property dividends amounting to

15 pence net per Camford share

for at least the next three financial years. The new property dividends will be in addition to the normal dividends to be paid out of earnings from Camford's engineering businesses.

It is intended that these property dividends will be paid in two equal instalments of 7½ pence net each, usually coinciding with our normal dividend payments. The first payment, an interim in respect of the year ending 30th September, 1991, will be made in December 1990. The second payment, a further interim for that year, will be made in July 1991.

After three years, we shall review our property dividend payments in the light of our progress in realising Camford's surplus property assets and of the returns obtained from reinvesting the realised proceeds in our engineering businesses. It would be the longer term aim of your Board that our aggregate dividends would be at least maintained thereafter.

The dividend forecast is rarely attacked.

Example 66: Attack on dividend forecast

Industrivarden - Redfearn takeover 1988
Extract from document dated 23/11/1988 from Industrivarden (Bidder)

A defensive dividend increase

Shareholders could be forgiven for being sceptical about the size of the increase in the final dividend proposed by the Redfearn Board. At the half year, in the light of the disappointing results, the Board did not see fit to recommend any increase in dividend. However, despite the fall in earnings per share, it has now proposed an increase in the dividend for the year as a whole of nearly one half. This results in a much lower level of dividend cover than the Board has, in recent years, considered appropriate. Moreover, the dividend cover figure published in the Redfearn defence document benefits substantially from the particularly low tax charge in the financial year just ended.

Would this dividend have been declared in the absence of our offer? Can this be described as prudent?

13. Current trading and prospects

Most companies include a paragraph in the takeover document on current trading and prospects. Without making a formal forecast, boards can give shareholders an indication of companies' performance. Penny & Giles' chairman did not give shareholders reason to be optimistic.

Example 67: Current trading and prospects

Bowthorpe - Penny & Giles takeover 1992
Extract from recommended offer document

Current trading and prospects
In the interim announcement released in November 1991, I stated that we had revised our plans for growth due to difficult market conditions. Since then there has been no improvement in the principal markets in which Penny & Giles operates.
Despite this difficult trading environment, sales have held up well and market shares have been maintained. This has been achieved through the introduction of a number of new products and concentrated marketing effort, but at the expense of some further pressure on margins, despite actions taken earlier in the year to reduce costs.

Lloyds Chemists were much more upbeat.

Example 68: Current trading and prospects

Lloyds Chemists - Macarthy takeover 1992
Extract from proposed acquisition document from Lloyds Chemists (Bidder)

Future prospects for the enlarged Lloyds Chemists
We believe that the prospects of the enlarged Lloyds group are excellent. Both Macarthy as well as existing Lloyds shareholders can expect to benefit from the commercial and financial strengths and future growth of the enlarged group.
The enlarged group will be a significant force in the health care industry, being the second largest chain of chemist stores, the second largest chain of drugstores and the largest specialist health food retailer, as well as having interests in pharmaceutical and veterinary products, and the wholesaling of toiletries.
Lloyds' results for the current financial year will reflect our strong trading, and will also include benefits from the businesses which we acquired in 1991, including Kingswood-GK and Holland & Barrett.

14. Disclosure of information privately

The research tests whether substantial shareholdings are relevant to disclosure because it is easier to inform a small number of large shareholders privately. Interviewees also referred to disclosure of information privately. The following

extracts support the evidence that information is disclosed privately. Coates Viyella refers to information disclosed at a meeting with a member of the board.

Example 69: Private disclosure

Coates Viyella - Tootal takeover 1991
Extract from increased and final offer document

4. Bases of calculations and sources of information (extract)
(g) Page 9 (extract)
The reference to pre-tax profits indicated by Tootal for the year ended 31st January, 1990 is derived from contemporaneous notes of a meeting with a member of the Board of Tootal in May, 1989.

ANI states that a profit forecast was disclosed privately to it and to other major shareholders.

Example 70: Private disclosure

ANI - Aurora takeover 1988
Letter to Aurora (target) shareholders from ANI (bidder) dated 26/11/1988

When we met Aurora in October 1988 to discuss an offer for your company we were given a profit forecast for 1988 and an asset revaluation estimate. This information was also given to Aurora's other major shareholders, including Electra. Shortly thereafter, Electra sold to us its entire holding of 19.1 per cent. at the Offer price.

Plessey refers to meetings with larger institutional shareholders.

Example 71: Private disclosure

GEC Siemens - Plessey takeover 1989
Extract from defence document dated 2/9/1989

Since our circular to shareholders was posted on 21 August, senior executives of Plessey have met with most of your Company's larger institutional shareholders to reinforce the message that this bid should be rejected. You will appreciate that it has not been possible to make personal contract with all shareholders. Plessey does have a large number of private shareholders who collectively own a significant proportion of the Company. If you are a private shareholder, I would like to take this opportunity to emphasise how important your support has been and continues to be to the Company.

Beazer had to disclose management forecasts and estimates, solely because this information had been disclosed to Hanson. This example illustrates the dangers of disclosing private information. As is brought out in the interviews, private

information must be disclosed to other interested parties if they request it. It is not clear why this information did not have to be reported on when subsequently disclosed.

Example 72: Other future orientated information

Hanson - Beazer takeover 1991
Extract from the recommended offer document of Hanson (Bidder)

Certain financial information regarding future operations of Beazer
Beazer does not as a matter of course make public forecasts or projections as to future revenues or results of operations. However, during the course of negotiations, Beazer provided certain confidential information to representatives of Hanson. See "Certain Considerations - Background of the Offer". Such information included the estimates by Beazer's management of Beazer's future financial performance that are set forth below (the "Beazer Information").

Year Ending June 30	Sales	Pre-Tax Profits(1)	Net Income
	(Pounds sterling - millions)		
1992	2,055.8	43.7	17.5
1993	2,356.1	76.1	37.0
1994	2,627.6	128.9	71.6
1995	2,974.1	159.8	92.0
1996	3,269.8	201.0	118.4
1997	3,591.6	250.6	150.9

(1) Pre-tax profit is income before income taxes, minority interests and extraordinary items.

The Beazer Financial Information was prepared in good faith solely in connection with the negotiation of the Master Facility Agreement and not with a view towards public disclosure or complying with either the published guidelines of the Commission regarding projections or forecasts or the American Institute of Certified Public Accountants' Guide for Prospective Financial Statements or the rules of the City Code. The Beazer Financial Information was not audited and is included in this document in compliance with US legal requirements.
The Beazer Financial Information, while presented with numerical specificity, was based upon various estimates and assumptions (some of which are referred to in the following paragraphs) which are inherently subject to significant business, economic and competitive uncertainties, contingencies and risks, all of which are difficult to quantify and many of which are beyond the control of Beazer. Accordingly, there can be no assurances that the financial performance set forth in the Beazer Financial Information will be realized and it is likely that Beazer's future financial performance will vary from that set forth above, possibly by material amounts.
The Beazer Financial Information was prepared by Beazer management during the spring of 1991 and provided to Beazer's banks in connection with the negotiation of the Master Facility Agreement. The Beazer Financial Information was based on management judgements at the time utilizing a number of internal sources, including historical financial information, annual plans, strategic plans and other business plans. The Beazer Financial Information was predicated upon, among other things, improved economic conditions in the UK and the US commencing in late 1991 or early 1992, the ability of Beazer to complete an aggregate of $175 million in planned asset dispositions in the next three fiscal years, the lack of the incurrence by Beazer of significant additional expense

Example 72: Other future orientated information (continued)

Hanson - Beazer takeover 1991
Extract from the recommended offer document of Hanson (Bidder)
related to environmental liabilities and the absence of any material changes to the business, operations and assets of Beazer (and, in particular, no sale of CHB Group). In addition, the Beazer Financial Information also assumed, among other things, that foreign exchange rates for the US dollar would be £1.00 = $1.80 and Beazer's effective average interest rate on borrowings would be 11%.
Neither Beazer nor Hanson presently intends to update or otherwise publicly revise the Beazer Financial Information presented herein to reflect circumstances existing or developments occurring after the preparation of such information or to reflect the occurrence of unanticipated events. The Beazer Financial Information is included in thia Prospectus solely because such information was provided to Hanson. The Beazer Financial Information has not been independently verified by Hanson, Lehman Brothers, County NatWest or Rothschild. Inclusion of the Beazer Financial Information in this Prospectus should not be regarded as a representation by any person that the results will be achieved.

Appendix 5: FULL LIST OF TAKEOVER BIDS IN THE STUDY

Source: *Acquisitions Monthly* January 1989, 1990, 1991, 1992, 1993

Ref	Year	Bidder	Target
1	1988	Nestlé S.A.(Swiss)	Rowntree (No.1)
2	1988	British Petroleum	Britoil
3	1988	Lloyds Bank	Abbey Life
4	1988	Daily Mail & General Trust	Associated Newspapers
5	1988	Mecca Leisure Group	Pleasurama
6	1988	British Coal Pension Trust	TR Industrial & General Trust
7	1988	Sears	Freemans
8	1988	Lowdnes	Harris Queensway
9	1988	St. Paul Companies (US)	Minet Holdings
10	1988	British & Commonwealth	Atlantic Computers
11	1988	British Gas	Acre Oil (No.2)
12	1988	Blue Circle	Birmid Qualcast (No.1)
13	1988	Williams Holdings	Pilgrim House Group
14	1988	Cable & Wireless	Telephone Rentals
15	1988	Wereldhave (Holland)	Peachey Property
16	1988	Wickes	Hunter
17	1988	Glowtrack	Virgin Group
18	1988	BBA Group	Guthrie Corporation
19	1988	Pernod Ricard (France)	Irish Distillers Group (No.3)(Irish)
20	1988	Iceland Frozen Foods	Bejam
21	1988	BAA	Lynton Property & Revisionary
22	1988	Coloroll	John Crowther (No.1)
23	1988	Kelt Energy	Carless
24	1988	Trafalgar House	Chase Property Holdings
25	1988	British & Commonwealth	Abaco Investments
26	1988	Atlantic Richfield (US)	Tricentrol (No. 2)
27	1988	Trusthouse Forte	Kennedy Brookes
28	1988	Plessey	Hoskyns Group
29	1988	British Aerospace	Rover Group
30	1988	Sandell Perkins	Travis & Arnold (No.1)
31	1988	Leisure Investments	LandLeisure
32	1988	Tarmac	Ruberoid (No. 2)
33	1988	ANI (Australia)	Aurora
34	1988	Kelt	Concorde Energy
35	1988	Ward White	A G Stanley
36	1988	AMEC	Matthew Hall
37	1988	Pergamon Prof. & Financial Services	AGB Research
38	1988	Campbell Soup (US)	Freshbake Foods
39	1988	Glynwed International	Amari
40	1988	Granada Group	DPCE Holdings
41	1988	DMWS 99	Invergordon Distillers

Ref	Year	Bidder	Target
42	1988	RHP	Burgess Group
43	1988	Imry International	City Merchant Developers
44	1988	Peek Holdings	Dubilier International
45	1988	Hepworth Ceramic Holdings	Henderson Group (No.2)
46	1988	Dowty	Case Group (No.2)
47	1988	Southend Property	Hampton Trust
48	1988	TI Group	Thermal Scientific
49	1988	Throgmorton Trust	Framlington Group
50	1988	Giltvote	Estates Property Investment Co. (No.2)
51	1988	LIT Holdings	Jersey General Investment Trust
52	1988	Pleasurama	Hard Rock International
53	1988	Mountleigh Group	Phoenix Properties & Finanace
54	1988	Industrivarden (Sweden)	Redfearn
55	1988	Lyonnaise des Eaux (France)	Essex Water Company
56	1988	Dryvale	Glass Gover Group
57	1988	Chartsearch	Burford
58	1988	Monaco (Panama)	Inoco
59	1988	Alexon	Ellis & Goldstein (No.2)
60	1988	Compagnie Générale des Eaux (France)	Lee Valley Water
61	1988	GENCOR (S.Africa)	MY Holdings
62	1988	Godfrey Davis Holdings	Falcon Industries
63	1988	Wagon Industrial Holdings	Banro Industries
64	1988	Woodchester Investments (Irish)	Moorgate Mercantile Holdings
65	1988	Williams Holdings	Smallbone
66	1988	S & W Berisford	Billingsgate City Securities
67	1988	Meggitt Holdings	Microsystems Group
68	1988	Hillshott	Dwek Group
69	1988	Boase Massimi Pollitt	Davidson Pearce
70	1988	Woolworth Holdings	Share Drug
71	1988	Oakwood Group	Coxmoore
72	1988	Braithwaite Group	SPP
73	1988	Waverley Cameron	Ronald Martin Groome
74	1988	British Coal Pension Funds	Edinburgh Fund Managers
75	1988	William Baird	Windsmoor
76	1988	TT Group	Beatson Clark
77	1988	Air Products & Chemicals (US)	Anchor Chemicals
78	1988	San Serif	Cowells
79	1988	Guinness	Buckley's Brewery
80	1988	Erskine House Group	Quest Group
81	1988	Skandinavisk (Denmark)	Arenson Group
82	1988	Bass	Zetters Leisure
83	1988	Lyonnaise des Eaux (France)	East Anglia Water Company
84	1988	Next	Alfred Preedy & Sons
85	1988	Cray Electronics	Marcol
86	1988	Broadland Properties	County Properties
87	1988	Systems Reliability	Fletcher Dennys Systems

Ref	Year	Bidder	Target
88	1988	TSB	Graham Motor Group
89	1988	Williams Holdings	Newage Transmissions
90	1988	S.Casket Group	Kingsley & Forester Group
91	1988	Adia (Swiss)	Task Force
92	1988	McLeod Russel Holdings	Granyte Surface Coatings
93	1988	Fred Olsen (Norway)	Nimslo International
94	1988	Leisure Investments	Theme Holdings
95	1988	Misys	Zygal Dynamics
96	1988	Stoddard Holdings	Sekers International
97	1988	Dixons	Wigfalls (No.2)
98	1988	Frederick Cooper	Lorlin Electronics
99	1988	Mowat Group	Joseph Webb
100	1988	Compagnie Générale des Eaux (France)	North Surrey Water
101	1988	Symphony Corporation	Oceana Development Investment Trust
102	1988	LIT Holdings	Asset Trust
103	1988	Red Rose Radio	Miss World
104	1988	Northern Engineering Industries	Victor Products
105	1988	Woolworth Holdings	Tip Top Drugstores
106	1988	Saint-Gobain (France)	TSL Group
107	1988	Whitecroft	Trent Holdings
108	1988	Farnell Electronics	Wayne Kerr
109	1988	Bolton House Investments	Thew Engineering
110	1988	Consortium	Lodge Care
111	1988	Moss Brothers	Cecil Gee
112	1988	Mr T. Bryan & Mr J. Bryan	Oceonics
113	1988	600 Group	Ealing Electro-Optics
114	1988	Holmes & Marchant Group	Catalyst Communications Group
115	1988	Irish Wire Products (Irish)	Questel
116	1988	Beauford Group	Dale Group
117	1988	Porter Chadburn	LDH Group
118	1988	Continuous Stationery	Prontaprint
119	1988	CDFC Trust	Plantation Trust
120	1988	Zurich Group	Ecobric Holdings (No.2)
121	1988	Boustead	Camotech
122	1988	Select Country Hotels	Jacksons Bourne End
123	1988	Bassett Foods	Jamesons Chocolates
124	1988	F&C Eurotrust	Nordic Investment Trust
125	1988	Altron (S.Africa)	Telematrix
126	1988	Community Hospitals	West Yorkshire Independent Hospitals
127	1988	Floyd Energy	New Darien Oil Trust
128	1988	Fairweather Investments (Cayman Isles)	Gnome Photographic Products
129	1988	Tarmac	Morceau Holdings
130	1988	Ketson	Moorgate Group
131	1988	Scowcroft Family	Gaynor Group
132	1988	Capital & Investment Securities	John Michael Design
133	1988	NCV Group	Derek Bryant

Ref	Year	Bidder	Target
134	1988	Cambridge Electronic	Infared Associates (US)
135	1988	Aims Homes	Lifecare International
136	1988	Mr B. C. Oates	Futura Holdings
137	1988	Lubbock Nominees (Australia)	Clogau Gold Mines
138	1988	Sanda	Waverley Cameron (No.1)
139	1988	Biwater Supply	East Worcestershire Waterworks
140	1988	Robert Lowe	Babygro Holdings
141	1988	Consortium	Oilfield Inspection Services
142	1988	Chalford Communications	Crown TV Productions
143	1988	Apricot	Sigmex
144	1988	Phipps & Sons	Headlam, Sims & Coggins
145	1988	Alan Particof Associates	BTS Group
146	1988	Jarat	Brewmaker
147	1988	Thermawear	André de Brett
148	1988	Health Care Services	Swindon Private Hospital
149	1988	Portsmouth WC Retirement Scheme	Portsmouth Water Company
150	1988	Consortium	Cifer
151	1988	Harlestone Industries	Fergabrook Group
152	1988	Aurora	North British Steel Group
153	1988	SC Johnson (US)	Chemical Methods Associates (US)
154	1988	Norex	London & Overseas Freighters
155	1988	Witzend Products	Selec TV
156	1988	Matahari 154	West Trust
157	1988	Mr C. Richards & Mr P. Baker	Dalkeith Holdings
158	1988	Company Pension Fund	Ariel Industries (10%)
1F	1988	Minorco (Luxembourg)	Consolidated Gold Fields (No.1)
2F	1988	Jacobs Suchard (Swiss)	Rowntree (No.2)
3F	1988	Barker & Dobson	Dee Corporation
4F	1988	Goodman Fielder Wattie (Australia)	Ranks Hovis McDougall
5F	1988	Elders IXL (Australia)	Scottish & Newcastle
6F	1988	Thomson T-Line	Suter
7F	1988	SHV (Holland)	Acre Oil (No.1)
8F	1988	Grand Metropolitan	Irish Distillers (No.2)(Irish)
9F	1988	Blue Circle	Birmid Qualcast (No.2)
10F	1988	Thomas Robinson	John Crowther (No.2)
11F	1988	Meyer International	Travis & Arnold (No.2)
12F	1988	GC & C Brands	Irish Distillers (No.1)(Irish)
13F	1988	Elf Aquitaine (France)	Tricentrol (No.1)
14F	1988	Raine Industries	Ruberoid (No.1)
15F	1988	Carless	Ryan International (No.1)
16F	1988	Clayform Properties	Stead & Simpson (No.1)
17F	1988	Newman Tonks	Henderson Group (No.1)
18F	1988	Gandalf Technologies (Canada)	Case Group (No.1)
19F	1988	Zurich Group	Ecobric Holdings (No.1)
20F	1988	Peachey Property Group	Estates Property Investment Co. (No. 1)
21F	1988	Berkertex	Ellis & Goldstein (No.1)

Ref	Year	Bidder	Target
22F	1988	Strong & Fisher	Pittard Garner
23F	1988	Dobson Park Industries	MS International
24F	1988	Telfos Holdings	Walter Runciman
25F	1988	Crown Industrial Group	Cundell Group (No.2)
26F	1988	Cookson Group	Wolstenholme Rink
27F	1988	Ferry Pickering Group	Cundell Group (No.1)
28F	1988	Allied Textile Companies	Hugh Mackay
29F	1988	Bennett & Fountain	Wigfalls (No.1)
30F	1988	Blick	Multitone Electronics
31F	1988	Caird Group	Wistech (No.1)
32F	1988	Nimex Resources	Monument Oil & Gas
33F	1988	Flavell Communications	Waverley Cameron (No.2)
1	1989	Smithkline (US)	Beecham
2	1989	Hanson	Consolidated Gold Fields (No.3)
3	1989	Isoscles	Gateway Corporation (No.1)
4	1989	GEC Siemens	Plessey (No.2)
5	1989	Ford Motor (US)	Jaguar
6	1989	AMP (Australia)	Pearl Group
7	1989	Deutsche Bank (German)	Morgan Grenfell
8	1989	Cilva Holdings	Avis Europe
9	1989	Boots	Ward White
10	1989	Pembridge Associates (US)	DRG
11	1989	DMWSL 033	Magnet
12	1989	Financière Richmont (Swiss)	Rothmans International
13	1989	Carlton Communications	UEI
14	1989	Anglo United	Coalite Group
15	1989	News International	William Collins (No.1)
16	1989	Bowater Industries	Norton Opax
17	1989	Bettrams Investment Trust	Pentland Industries
18	1989	MB Group	Caradon
19	1989	Rolls-Royce	Northern Engineering Industries
20	1989	Marketchief	Imry Merchant Developers
21	1989	Peel Holdings	London Shop
22	1989	Otkem (France)	Coates Brothers
23	1989	Fletcher Challange (NZ)	UK Paper (No.2)
24	1989	British Aerospace	Athington Securities
25	1989	JMB Realty (US)	Randsworth Trust
26	1989	Ladbroke Group	Thomson T-Line
27	1989	Hambros	Hambros Investment Trust
28	1989	Hunting Gibson	Hunting Associated Industries
29	1989	Textron (US)	Avdel (No.2)
30	1989	Omnicom (US)	Boase Massini Pollitt (No.2)
31	1989	Clayform Properties	Stead & Simpson (No.2)
32	1989	Priest Marians	Local London Group
33	1989	Charles Church Holdings	Charles Church Development
34	1989	Caparo Group	Armstrong Equipment (No.2)

Ref	Year	Bidder	Target
35	1989	Vickers	Ross Catherall Group
36	1989	Hodgson Holdings	Kenyon Securities
37	1989	Bank of Yokohama (Japan)	Guinness Mahon
38	1989	Banner Industries (US)	Transcontinental Services Group
39	1989	Bank in Liechtenstein	GT Management
40	1989	Yeoman International (Irish)	CLF Holdings
41	1989	Emerson Electric (US)	BSR International
42	1989	Cadbury Schweppes	Bassett Foods (No.2)
43	1989	Evode Group	Chamberlain Phipps (No.1)
44	1989	General Oriental Investments	Anglo Leasing
45	1989	Ford Sellar Morris Properties	Brookmount
46	1989	Midland Bank	Billingsgate City Securities
47	1989	Conrad Holdings	Marler Estates
48	1989	MMG Patricof European Buy-in fund	James Neill Holdings
49	1989	LOG	Illingsworth Morris
50	1989	Leucadia (US)	Cambrian & General Securities
51	1989	Cornwall Trust	Highland Participants
52	1989	Digger	Ryan International (No.2)
53	1989	Unotec Holdings (Swiss)	Cambridge Instrument Company
54	1989	Steelcase Strafor (French)	Gordon Russell
55	1989	British Steel Pension Fund	Smaller Companies International Trust
56	1989	Bouygues (French)	Mid Southern Water
57	1989	Pavilion Leisure	Parkdale Holdings
58	1989	Fitzwilton (Irish)	Keep Trust
59	1989	Bealaw	Prestwich Holdings
60	1989	Brittania Group	British Syphon Industries
61	1989	Hunting Gibson	Hunting Petroleum Services
62	1989	GSM	Tyzack
63	1989	Boots	Underwoods
64	1989	Miss World Group	Piccadilly Radio
65	1989	Lyonnaise des Eaux (French)	Newcastle & Gateshead Water
66	1989	Scott & Robertson	Alida Holdings
67	1989	Lyonnaise des Eaux (French)	Sunderland & S Shields Water
68	1989	Triplex Lloyd	Christy Hunt
69	1989	Jefferson Smurfit (Irish)	Cundell Group (No.3)
70	1989	MAI	MIL Research Group
71	1989	TIP Europe	CSL Corporation
72	1989	Murray Electronic	Murray Technology Investments
73	1989	WPP Group	Millward Brown
74	1989	Fuchs Petrolub (German)	Silkolene Lubricants
75	1989	Charterhall	Corah
76	1989	Raine Industries	Plumb Holdings
77	1989	Associated British Ports	Red Funnell (No.2)
78	1989	Emess	JSB Electrical
79	1989	Anglo Investments	Beacon Group
80	1989	Elf Aquitaine (French)	Johnstone's Paint

Ref	Year	Bidder	Target
81	1989	Lodge Care	Property Company of London
82	1989	Aviva Petroleum (US)	Viking Resources Trust
83	1989	Dewey Warren Holdings	Argyle Trust
84	1989	LIT Holdings	Johnson Fry
85	1989	Prior Securities	Knobs & Knockers
86	1989	Doctus	Prospective Group
87	1989	Wembley	Juliana's Holdings
88	1989	Europa Minerals	TR Energy
89	1989	Haden MacLellan Holdings	W A Holdings
90	1989	Peek	Polytechnic Electonic
91	1989	Munksjo (Swedish)	Chapman Industries
92	1989	Wassall	Antler
93	1989	Beauford	Wade Potteries
94	1989	William Cook	George Blair
95	1989	Biwater	Bournemouth & District Water
96	1989	Chillington Corporation	Anglo-Eastern Plantations
97	1989	Bouygues (French)	Mid Sussex Water
98	1989	Wiseoak Group/Belmont Homes	Reliant Group
99	1989	Bowater Industries	Viking Packaging
100	1989	Symphony Corporation (S.Africa)	Oceana Development Investment Trust
101	1989	Norton Group	Minty
102	1989	Bouygues (French)	Eastbourne Water
103	1989	HTV	CCA Publications
104	1989	EIC	Global Group
105	1989	Apricot Computers	ITL Information Technology
106	1989	Lookers	SMAC Group
107	1989	Boots	Miller & Santhouse
108	1989	Corton Beach	Lyon & Lyon
109	1989	Newman Tonks Group	Laidlaw Thomson Group
110	1989	Beckenham Group	Bardsey
111	1989	Fitzwilton (Irish)	M6 Cash & Carry
112	1989	Astra Trust	Splash Products
113	1989	Compass Group	Health Care Services
114	1989	Vasella	Jacksons Bourne Industries
115	1989	Nykredit (Danish)	Business Mortgages Trust (No.2)
116	1989	Guardian & Manchester Evening News	Broadcast Communications
117	1989	Severn	Ratcliffs (Great Bridge)
118	1989	Compagnie Générale des Eaux (France)	Folkestone & District Water (No.1)
119	1989	Donelon Tyson	Tysons
120	1989	Timelaw	Triangle Trust
121	1989	Expedier Leisure	Medminster
122	1989	P & P	Personal Computers
123	1989	Compagnie Générale des Eaux (France)	Tendring Hundred Waterworks
124	1989	Biwater	West Hampshire Water
125	1989	Ferrari Computer Services	Cifer
126	1989	Sidlaw Group	HPC

Ref	Year	Bidder	Target
127	1989	J Saville Gordon	London & Overseas Land
128	1989	Twigrealm	Meat Trade Suppliers (No.2)
129	1989	Regal Hotel Group	Rivoh Cinemas
130	1989	Sidlaw Group	Transrap Holdings
131	1989	Charterhall	Textured Jersey
132	1989	Epicure Holdings	Habit Precision Engineering
133	1989	Audit & General Holdings	Humberside Electronics
134	1989	Offertest	Wistech (No.2)
135	1989	Apricot Computers	DDT Group (No.2)
136	1989	Wassall	Hille Ergonom
137	1989	Bouygues (French)	West Kent Water (No.1)
138	1989	Kooperativa Forbundet (Swedish)	Chambers & Fargus
139	1989	ERI	Alva Investment Trust
140	1989	Bromsgrove Industries	Delmar Group
141	1989	Parris/European Trust	Jantar
142	1989	Adamas (Swedish)	RW Toothill
143	1989	Brook	AJ Worthington
144	1989	James River (US)	William Sommerville
145	1989	City & Westminster Financial	A & M Group
146	1989	Ferrari Holdings	UCL Group
147	1989	Abdullah Trusts	SI Group (No.2)
148	1989	Pentland Group	Accord Publications
149	1989	Investor Group	GF Lovell
150	1989	Lynx Holdings	Lynx Group
151	1989	CRT Group	R Smallshaw (Knitwear)
1F	1989	Anglo Group/Hoylake	BAI Industries
2F	1989	Minorco (Luxembourg)	Consolidated Gold Fields (No.2)
3F	1989	Newgateway (US)	Gateway Corporation (No.2)
4F	1989	GEC Siemens	Plessey (No.1)
5F	1989	Rodamco (Dutch)	Hammerson Property Investment
6F	1989	Norton Opax	De La Rue
7F	1989	Groupe de la Cité (French)	William Collins (No.2)
8F	1989	Coates Viyella	Tootal
9F	1989	Metsa-Serla (Finnish)	UK Paper (No.1)
10F	1989	Blue Circle	Myson Group (No.2)
11F	1989	Yale & Valour	Myson Group (No.1)
12F	1989	Lilley	Tilbury Group
13F	1989	Wiliam Low	Budgens
14F	1989	BDDP (French)	Boase Massimi Pollitt (No.1)
15F	1989	Banner Industries (US)	Avdel (No.1)
16F	1989	British Empire Securities	Schroder Global Trust
17F	1989	Meggitt	United Scientific Holdings
18F	1989	Atlas Copco (Swedish)	Desoutter Brothers (No.1)
19F	1989	Bowater Industries	Chamberlain Phipps (No.2)
20F	1989	Wardle Storeys	Armstrong Equipment (No.1)
21F	1989	Local London Group	Marina Development Group

Ref	Year	Bidder	Target
22F	1989	IEP (Hong Kong)	Molins (No.1)
23F	1989	Procordia (Swedish)	Bassett Foods (No.1)
24F	1989	Blacks Leisure	A Goldberg
25F	1989	Sally UK Holdings	Red Funnell (No.1)
26F	1989	First Technology	Ricardo Group
27F	1989	Robert Fraser Group	Dewey Warren Holdings
28F	1989	Alpha Gamma	Meat Trade Suppliers (No.1)
29F	1989	National Home Loans Holdings	Business Mortgages Trust (No.1)
30F	1989	Clydesdale Investment Trust	Bailie Gifford Technology
31F	1989	Peter Black Holdings	Lambert Howarth Group
32F	1989	Southern Water Authority/AIPF	Folkestone & District Water (No.2)
33F	1989	Vistec	DDT Group (No.2)
34F	1989	Southern Water Authority/AIPF	West Kent Water (No.2)
35F	1989	Kembrey Group	SI Group (No.1)
36F	1989	Moneytab	Ketson
1	1990	Northern Telecom (Canada)	STC
2	1990	British Coal Pensions Funds	Globe Investment Trust
3	1990	Brierley Investments (NZ)	Mount Charlotte
4	1990	P&O Chelsfield	Laing Properties
5	1990	SPP (Swedish)	London & Edinburgh Trust
6	1990	Rank Organisation	Mecca Leisure Group
7	1990	Fletcher Challange (NZ)	UK Paper (No.2)
		Excluded - doubled counted by *Acquisitions Monthly*. Bid is included as 23-1989	
8	1990	Booker	Fitch Lovell
9	1990	Cap Gemini Sogeti (French)	Hoskyns Group
10	1990	Fisons	VG Instruments
11	1990	Burmah Castrol	Foseco
12	1990	Compagnie Générale des Eaux (France)	AMI Healthcare Group
13	1990	Blue Circle Industries	Myson Group (No.3)
14	1990	GAN (French)	General Portfolio
15	1990	BET	Hestar (No.2)
16	1990	Jameel Group (S.Arabia)	Hartwell (No.2)
17	1990	Transatlantic Holdings	Continental & Industrial Trust
18	1990	Queens Moat Houses	Norfolk Capital Group
19	1990	Buhrmann-Tetterode (Dutch)	Robert Horne Group
20	1990	Interpublic Group (US)	Lowe Group
21	1990	Rothmans International (Swiss)	P.J.Carroll and Company
22	1990	ADT (Bermuda)	Brittania Security Group
23	1990	Brierley Investments (NZ)	Western Motor Holdings
24	1990	Etablissement Funtal (French)	Dukeminster
25	1990	Atlas Copco (Swedish)	Desoutter Brothers (No.2)
26	1990	Brierley Investments (NZ)	Tozer Kemsley & Millbourn
27	1990	Bear Brand	Leisure Investments
28	1990	Jorraban	Really Useful Group
29	1990	European Leisure (Irish)	Midsummer Leisure
30	1990	Renown Incorporated (Japan)	Aquascutum

Ref	Year	Bidder	Target
31	1990	AdSteam (Australian)	Camford Engineering
32	1990	Avena (Swedish)	Walter Runciman
33	1990	Scandinavian Investments	Scandinavian Bank
34	1990	Asea Brown Boveri (Swiss)	ABB Kent
35	1990	Norfolk House Group	Frost Group
36	1990	International Marine Holdings (US)	Benjamin Priest
37	1990	CTP Communications (French)	Builder Group
38	1990	Brierley Investments (NZ)	GPG
39	1990	Saga Leisure	Saga Group
40	1990	BM Group	Blackwood Hodge
41	1990	Scottish Widows	Connell
42	1990	Compagnie Générale des Eaux (France)	Colne Valley Water Company
43	1990	Wassall	Metal Closures Group
44	1990	United Engineers (Malaysian)	Kinta Kellas Investment
45	1990	IAWS Group (Irish)	R & H Hall (Irish)
46	1990	Gartmore EP Investment Trust	Gartmore I & F Trust
47	1990	Healthcall Group	Air Call
48	1990	Maxwell Foundation (Liechtenstein)	Pergamon
49	1990	Co-Steel (Canadian)	Sherness Steel
50	1990	King Black & Associates	Monotype Corporation (No.1)
51	1990	TT Group	Crystalate Holdings (No.1)
52	1990	RSCG (French)	KLP Group
53	1990	Spotlaunch	Walter Alexander
54	1990	Leigh Interests	HT Hughes
55	1990	Jardine Matheson Holdings (Hong Kong)	Lancaster
56	1990	Glunz (German)	Aaronson Brothers
57	1990	Heron (Swedish)	Epicure Industries
58	1990	Compagnie Générale des Eaux (France)	Rickmansworth Water Company
59	1990	Hillsdown Holdings	Strong & Fisher
60	1990	York Trust Group	International City Holdings
61	1990	Anglo Group	Anglo Group
62	1990	Yule Catto	Unilock Holdings
63	1990	L Bartley Holdings	Batleys
64	1990	Ricardo Group	SAC International
65	1990	Fastighets Ab Accura (Swedish)	City Gate Estates
66	1990	CGE (French)	National Telecommunications
67	1990	Hambros Bank	HATT
68	1990	Asahi Industrial Company (Japan)	Triefus
69	1990	Thyssen (German)	Davies & Metcalfe
70	1990	Voltex Holdings (S.Africa)	Bennett & Fountain
71	1990	Lilley	Hatfield Estates
72	1990	Wurth Holdings (German)	Monks & Crane
73	1990	Emess	Royal Sovereign
74	1990	Nobel Industries (Swedish)	Continental Microwave
75	1990	Soc Générale de Surveillance (Swiss)	Technology Project Services
76	1990	ER Carpenter (US)	Hyman

Ref	Year	Bidder	Target
77	1990	Metro Radio	Yorkshire Radio
78	1990	Brauerei Eichhof Group (Swiss)	International Colour Management
79	1990	Suter	Chemoxy International (No.2)
80	1990	Systems Reliability Holdings	Optim Group
81	1990	Grovewood Securities	Early's of Watney
82	1990	Grovewood Securities	Priest Marians Holdings
83	1990	Wace Group	Parkway Group
84	1990	Bioplan Holdings	Cooks Industries
85	1990	Mark IV Industries (US)	Klark - Teknik
86	1990	Scapa	Just Rubber
87	1990	Franke Holdings (Swiss)	Carron Phoenix (No.2)
88	1990	Reader's Digest Association (US)	David & Charles
89	1990	Outline	KCA Drilling Group
90	1990	Daily Mail & General Trust	Hobsons Publishing
91	1990	Siemens (German)	AMS Industries
92	1990	Shandwick	Paragon Communications
93	1990	Stratagem Group	Colonnade Development Capital
94	1990	BS Group	Scott's Restaurant
95	1990	Arlen	Highland Electronics
96	1990	Goldstar	James Dickie
97	1990	Clayform Properties	Dunloe House Group (Irish)
98	1990	Allied Textile Companies	Hugh Mackay
99	1990	Wolverhampton	Regentcrest
100	1990	Millwall Holdings	Tavern Leisure
101	1990	Transwood Consortium	VPI Group
102	1990	Bridgend Group	Woodington (Irish)
103	1990	Wace Group	John Green & Son
104	1990	Reece	Cauldron Group
105	1990	Cambridge Group	Xtra-vision (Irish)
106	1990	Mowat Group	Pennant Group
107	1990	Lawrie Group	Walter Duncan
108	1990	Transwood Consortium Fund	Filofax Group
109	1990	Cargo Control	Automobiles of Distinction
110	1990	Ferrari Holdings	Pericom
111	1990	Southwest Resources	ADG Group
112	1990	Wharfedale	Audio Fidelity
113	1990	Rowe Evans Investments	Jitra Rubber
114	1990	Northumberland Trust	British Kidney Patients Assoc. Investment
115	1990	AS Perloff/Panther Securities	Multitrust
116	1990	Document Solutions International	Systems Connections
117	1990	Bos Gosiland/P Reinhard (Dutch)	R&V Information Systems (Dutch)
118	1990	Farr	Chestergate Group
119	1990	Lawrie Group	Assam-Dooars
120	1990	Olivetti (Italian)	TDS Circuits
121	1990	Premierflag	Executex Clothing
122	1990	Lawrie Group	Western Dooars

Ref	Year	Bidder	Target
123	1990	ISS (Danish)	Mainmet Holdings
124	1990	Compagnie Générale des Eaux (France)	Lee Valley Water
125	1990	Geoffrey Davy	Knobs & Knockers
		Excluded - target previously taken over (85-1989) - private company at time of this bid.	
1F	1990	Kingfisher	Dixons Group
2F	1990	Jameel Group (S.Arabia)	Hartwell (No.1)
3F	1990	Adia (Swiss)	Hestair (No.1)
4F	1990	Y J Lovell	Higgs & Hill
5F	1990	Godfrey Davis Holdings	Sketchley (No.1)
6F	1990	Compass Group	Sketchley (No.2)
7F	1990	Leucadia National Corporation (US)	Molins (No.2)
8F	1990	Severn Trent	Caird Group
9F	1990	Headington Investments	Monotype Corporation (No.2)
10F	1990	Glynwed International	Alumasc Group
11F	1990	Vishay Intertechnology (US)	Crystalate Holdings (No.2)
12F	1990	Sea Containers (Bermuda)	Isle of Man Steam Packet
13F	1990	MTM	Chemoxy International (No.1)
14F	1990	East of Scotland Industrial Investments	Saltire Insurance Investments (No.1)
15F	1990	Etablissements Bene (French)	Carron Phoenix (No.1)
16F	1990	Heart of Midlothian Football Club	Edinburgh Hibernian
17F	1990	Mr D.C.A.Bramall	Sanderson Murray & Elder
1	1991	BTR	Hawker Siddeley Group
2	1991	LASMO	Ultramar
3	1991	Williams Holdings	Yale & Valor
4	1991	Hanson	Beazer
5	1991	Union Ass Paris/Transatlantic Holdings	Sun Life
6	1991	Coates Viyella	Tootal Group
7	1991	BTR	Rockware Group
8	1991	Thorn EMI	Thames Television
9	1991	General Motors (US)	SD-Scicon (No.2)
10	1991	Shanks & McEwan Group	Rechem Environmental Services
11	1991	London Merchant Securities	Westpool Invesment Trust
12	1991	Trafalgar House	Davy Corporation
13	1991	Evered	Bardon Group
14	1991	Neste (Finnish)	Sovereign Oil & Gas
15	1991	Tilbury Group	Robert M Douglas
16	1991	Veba (German)	Memec
17	1991	Sankyo Seiko (Japan)	DAKS Simpson Group
18	1991	Headington Investments	First Tokyo Index Trust
19	1991	BSN (French)	W & R Jacob (Irish)
20	1991	Greencore (Irish)	Food Industries (Irish)
21	1991	Auricom Beteiligungs (Austrian)	Telfos Holdings (No.2)
22	1991	Mayne Nickless (Australia)	Interlink Express
23	1991	Au Printemps (French)	Empire Stores
24	1991	Simon Engineering	Robertson Group
25	1991	Fuchs PetrolubAG Oel & Chemie(German)	Century Oils

Ref	Year	Bidder	Target
26	1991	Hazlewood Foods	Sutherland Holdings
27	1991	Usinor-Sacilor (French)	ASD
28	1991	Franz Haniel (German)	Unistrut Europe
29	1991	Hopkinsons Group	Carbo
30	1991	Jupiter Tarbutt Merlin	Tyndall Holdings
31	1991	Aegis Group	TMD Advertising
32	1991	Whittington	Ross Group
33	1991	Cambridge Electronic Industries	Tace (No.1)
34	1991	ACT Group	Quotient
35	1991	Marrell (French)	Edbro
36	1991	Alan Cooper Holdings	Mayfield
37	1991	Wyevale Garden Centres	Cramphorn
38	1991	Hospital Corporation International (US)	Bioplan Holdings
39	1991	Southern Radio	Invicta Radio
40	1991	Unotec Holdings (Swiss)	Leica
41	1991	Scottish Cities Investment Trust	Anglo Scandinavian Invest. Trust (No.1)
42	1991	Stirling Group	Ritz Design Group
43	1991	Compagnie de Suez (French)	Wentworth International
44	1991	East Midlands Electricity	Ambassador Security
45	1991	MJ Gleeson Group	Colroy
46	1991	IMI	Birmingham Mint
47	1991	Computer Sciences (US)	Butler Cox
48	1991	Caparo Group	Caparo Industries
49	1991	Berkeley Group	James Crosby
50	1991	Bank of Yokohama (Japan)	Guinness Mahon
51	1991	EMAP	Radio City (Sound of Merseyside)
52	1991	Jupiter Tarbutt Merlin	Vantage Securities
53	1991	County Sound/Radio Mercury	Third Mile Investments (No.2)
54	1991	Matahari 374	Kingsgrange (No.1)
55	1991	Heywood Williams	Thurgar Bardex
56	1991	P-E International	Handley-Walker Group
57	1991	Aberdeen Trust	Saltire Insurance Investments (No.2)
58	1991	Consortium	Quiligotti
59	1991	Stratagem Group	Touchstone Group (No.1)
60	1991	Alan Sugar/Terry Venables	Tottenham Hotspur
61	1991	Cambridge Electonic Industries	Goring Kerr (No.1)
62	1991	Triplex Lloyd	Dunstall Park Holdings
63	1991	Conroy Petroleum (Irish)	Atlantic Resources (Irish)
64	1991	Bank of Scotland	Bank of Wales
65	1991	Rutland Trust	Harcourt Group
66	1991	Publicis (French)	Geers Gross
67	1991	Northumbrian Fine Foods	John J Lees
68	1991	Adia (Swiss)	Brompton Holdings
69	1991	Kanta Enterprises	F Copson
70	1991	Nansin (Japan)	Flexello Castors & Wheels
71	1991	RCK (US)	Harding Group

Ref	Year	Bidder	Target
72	1991	Pearson	Analysis Holdings
73	1991	Jefferson Smurfit (Irish)	Finlay Packaging
74	1991	EIS Group	Flightspares
75	1991	Wilton Group	Cowan de Groot (No.1)
76	1991	ECsoft (Dutch)	Synapse Computer Services
77	1991	Rapallo	PML Group
78	1991	Microvitec	Logitek
79	1991	Hays	Citybond Storage Services
80	1991	Anglo-Park	St James Estates
81	1991	Waverley Cameron	BTS Group
82	1991	Giltrap Motor Holdings	Malaya Group
83	1991	Holywell Property	Dunton Group
84	1991	Time Products	Apollo Watch Products
85	1991	West Industries	Audit & General
86	1991	Listcause	Bexbuild Developments
87	1991	Kimball International (US)	Herrburger Brooks
88	1991	Groupe Boulet Dru Dupuy Petit (French)	Broad Street Group
89	1991	European Financial Network Holdings	Wyndham Group
90	1991	SCOA (French)	CPU Computers
91	1991	Leon Andrews-Zannetou/Rex Williams	Scottish Ice Rink Company
		Excluded - telephone conversation with Mr Leon Andrews-Zannetou ascertained that transaction reported in *Acquisitions Monthly* did not take place	
1F	1991	Williams Holdings	Racal Electronics
2F	1991	American Brands (US)	Invergordon Distillers
3F	1991	Southend Property Holdings	Frogmore Estates
4F	1991	Oceana Investment Corporation	Etam
5F	1991	Boddington Group	JA Devenish
6F	1991	Cray Electronics	SD-Scicon (No.1)
7F	1991	Grampian Holdings	Macarthy (No.1)
8F	1991	Lloyds Chemists	Macarthy (No.3)
9F	1991	Unichem	Macarthy (No.2)
10F	1991	William Cook	Telfos Holdings (No.1)
11F	1991	NMC Group	API Group
12F	1991	Thermo Electron Corporation (US)	Tace (No.3)
13F	1991	Stac Partners Corporation (US)	Tace (No.2)
14F	1991	ASIT Investment Trust	Anglo Scandanivian Inv. Trust (No.2)
15F	1991	Dowding & Mills	Torday & Carlisle
16F	1991	TT Group	Magnetic Materials Group (No.1)
17F	1991	Dewhirst Group	Kingsgrange (No.2)
18F	1991	Anglo Scandinavian Investment Trust	Lancashire & London Investment Trust
19F	1991	Thermo Electron Corporation (US)	Goring Kerr (No.2)
20F	1991	Getronics (Dutch)	Touchstone Group (No.2)
21F	1991	TBF Thompson	McLaughlin & Harvey
22F	1991	Bridgend Group	Cowan de Groot (no.2)
23F	1991	Estonia Venture Inc (Swiss)	Merlin International Properties
24F	1991	Consortium	Third Mile Investments (No.1)

Ref	Year	Bidder	Target
25F	1991	Corporate Services Group	Ibex Holdings
1	1992	HSBC Holdings	Midland Bank
2	1992	Elsevier (Dutch)	Reed International
3	1992	Tomkins	Ranks Hovis McDougall (No.2)
4	1992	Redland	Steetley
5	1992	Franklin Resources (US)	Templeton Galbraith & Hansberger (CI)
6	1992	TI Group	Dowty Group
7	1992	Transatlantic Holdings	Capital & Counties
8	1992	Lloyds Chemists	Macarthy (No.4)
9	1992	Blockbuster Entertainment (US)	Cityvision
10	1992	Robert Bosch (German)	Worcester Group
11	1992	Carlton Communications	Pickwick Group
12	1992	First National Bank S. Africa (S.Africa)	Henry Ansbacher Holdings
13	1992	BM Group	Thomas Robinson Group
14	1992	TSB Group	TSB Bank Channel Islands
15	1992	Bowthorpe Holdings	Penny & Giles International
16	1992	Yorkshire Television	Tyne Tees Television
17	1992	Yattendon Investment Trust	Marina Developments
18	1992	Jameel Group (S.Arabia)	Trimoco
19	1992	Raine Industries	Walter Lawrence
20	1992	AAH Holdings	Cahill May Roberts Group (Irish)
21	1992	Merchant Navy Officers Pension Fund	Ensign Trust
22	1992	Throgmorton 1000 Smallest Cos Trust	Throgmorton
23	1992	Corning	JS Pathology
24	1992	Management team	BHH Group
25	1992	Jack Chia (Singapore)	Boustead
26	1992	Meggitt	Micrelec Group
27	1992	Barlo Group (Irish)	IRG (Irish)
28	1992	Brambles Industries (Australia)	Security Archives
29	1992	Hospital Corporation International (US)	Bioplan Holdings
		Excluded - double counted by *Acquisitions Monthly*. Bid is included as 38-1991	
30	1992	TR Property Investment Trust	New England Properties
31	1992	Dainippon Ink & Chemicals (Japan)	Usher-Walker
32	1992	Bromsgrove Industries	GW Thornton Holdings
33	1992	First Charlotte Assets Trust	Clydesdale Investment
34	1992	Spring Ram Corporation	Stag Furniture Holdings
35	1992	Antares Group	Harrison Industries
36	1992	TT Group	Magnetic Materials Group (No.2)
37	1992	Polyfinance (French)	Polymark International
38	1992	Herring Son & Daw Holdings	Baker Harris Saunders Group
39	1992	Abbot Group	Blystad Group
40	1992	AFE (French)	Cronite Group
41	1992	United Energy	AmBrit International (No.2)
42	1992	Prontaprint	Continuous Stationery
43	1992	Broadland Properties	New Cavendish Estates
44	1992	Lowe Funds	Melville Group

Ref	Year	Bidder	Target
45	1992	Frogmore Estates	Trevian Holdings
46	1992	Toms Fabrikker (Danish)	Taverners
47	1992	BM Group	British Building & Engineering Appliances
48	1992	ACT Group	NMW Computers
49	1992	Pentos	Wilding Office Equipment
50	1992	Hong Leong/Hume Industries (Malaysia)	Ramus Holdings
51	1992	Sipa Resources International (Australia)	Burmin Exploration & Development (Irish)
52	1992	BLP Employee Share Ownership Trust	BLP Group
53	1992	EIT Group	Sintrom
54	1992	Baldwin	Simpsons of Cornhill
55	1992	Moorfield Estates	Grosvenor Terrace Developments
56	1992	Individual	Children's Medical Charity Invest. Trust
57	1992	Manx Petroleum	Celtic Basin Oil Exploration
58	1992	Lancaster Associates	Malaya Group
59	1992	Guardian Foundations	Associated Energy Services
1F	1992	Hanson	Ranks Hovis McDougall (No.1)
2F	1992	Amshold	Amstrad
3F	1992	Greene King	Morland
4F	1992	Kalon Group	Manders (Holdings)
5F	1992	T Cowie	Henlys Group
6F	1992	Petrocon Group	James Wilkes
7F	1992	Brierley Investments (NZ)	Gibbs Mew
8F	1992	Martin Currie Pacific Trust	Pacific Horizon Investment Trust
9F	1992	Pittencrieff	AmBrit International (No.1)
10F	1992	Coplex Resources (Australia)	Tuskar Resouces (Irish)

Appendix 6: LIST OF ABBREVIATIONS

ANOVA	Analysis of variance
d.f.	Degrees of freedom
F	Forecasters (except in appendix 5 where F = Failed)
GAAP	Generally accepted accounting policies
GDP	Gross domestic product
GLS	Generalised least squares
IPO	Initial public offering
LIBOR	London inter-bank overnight rate
m	Millions
MCRV	Making corporate reports valuable
N/A	Not applicable
NF	Nonforecasters
OLS	Ordinary least squares
p.a.	per annum
PR	Public relations
SUR	Seemingly-unrelated-regressions
WLS	Weighted least squares
UK	United Kingdom
US	United States